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ABSTRACT

The National Household Education Survey (NHES) is a data collection system of the National Center for Education Statistics. It focuses on educational issues that are best addressed by contacting individual households rather than institutions. The primary purpose of the NHES is to conduct repeated measurements of the same phenomena at different points in time. In 1991, the NHES collected information about the school readiness of children up to grade 2 and about school safety and discipline. This paper presents information on unit response, weighting, item response, and imputation in the 1993 NHES. The section on "Unit Response in the NHES:93" describes responses and completion rates for the NHES:93, including data on these rates for the Screener Interview, the extended School Readiness interviews, and the extended School Safety and Discipline interviews broken down for parents and students. "Weighting and Estimation" discusses the procedures used for producing the weights to estimate characteristics from the NHES:93 sample and to estimate sampling errors for those estimates. "Item Response in the NHES:93" presents item response rates for the NHES:93 questionnaire and discusses the methodology used to compute response rates. "Imputation in the NHES:93" describes the imputation procedures used in this survey, which was the first NHES survey to impute all missing values. (Contains 19 tables and 7 references.) (SLD)

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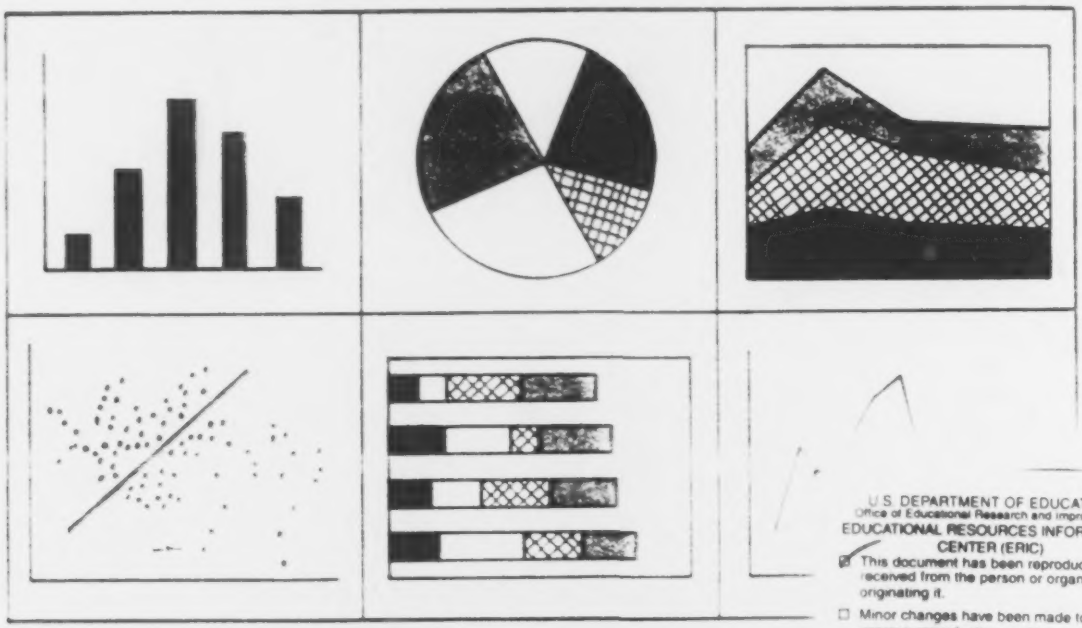
Working Paper Series

Unit and Item Response, Weighting, and Imputation Procedures in the 1993 National Household Education Survey (NHES:93)

Working Paper No. 97-05 February 1997



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Unit and Item Response, Weighting, and Imputation Procedures in the 1993 National Household Education Survey (NHES:93)

Working Paper No. 97-05 February 1997

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February 1997

Foreword

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Unit and Item Response, Weighting, and Imputation Procedures

in the

1993 National Household Education Survey (NHES:93)

Prepared by:

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Prepared for:

U.S. Department of Education
Office of Educational Research and Development
National Center for Education Statistics

February 1997

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Overview of the National Household Education Survey

The National Household Education Survey (NHES) is a data collection system of the National Center for Education Statistics (NCES), which has as its legislative mission the collection and publication of data on the condition of education in the Nation. The NHES is specifically designed to support this mission by providing information on those educational issues that are best addressed by contacting households rather than schools or other educational institutions. The NHES provides descriptive data on the educational activities of the U.S. population and offers policymakers, researchers, and educators a variety of statistics on the condition of education in the United States.

The NHES is a telephone survey of the noninstitutionalized civilian population of the U.S. Households are selected for the survey using random digit dialing (RDD) methods, and data are collected using computer-assisted telephone interviewing (CATI) procedures. 45,000 to 64,000 households are screened for each administration, and individuals within households who meet predetermined criteria are sampled for more detailed or extended interviews. The data are weighted to permit estimates of the entire population. The NHES survey for a given year typically consists of a Screener, which collects household composition and demographic data, and extended interviews on two substantive components addressing education-related topics. In order to assess item reliability and inform future NHES surveys, each administration also includes a subsample of respondents for a reinterview.

The primary purpose of the NHES is to conduct repeated measurements of the same phenomena at different points in time. Throughout its history, the NHES has collected data in ways that permit estimates to be tracked across time. This includes repeating topical components on a rotating basis in order to provide comparative data across survey years. In addition, each administration of the NHES has benefited from experiences with previous cycles, resulting in enhancements to the survey procedures and content. Thus, while the survey affords the opportunity for tracking phenomena across time, it is also dynamic in addressing new issues and including conceptual and methodological refinements.

A new design feature of the NHES program implemented in the NHES:96 is the collection of demographic and educational information on members of all screened households, rather than just those households potentially eligible for a topical component. In addition, this expanded screening feature included a brief set of questions on an issue of interest to education program administrators or policymakers. The total Screener sample size was sufficient to produce state estimates of household characteristics for the NHES:96.

Full-scale implementations of the NHES have been conducted in 1991, 1993, 1995, and 1996. Topics addressed by the NHES:91 were early childhood education and adult education. The NHES:93 collected information about school readiness and school safety and discipline. The 1991 components were repeated for the NHES:95, addressing early childhood program participation and adult education. Both components underwent substantial redesign to incorporate new issues and develop new measurement approaches. In the NHES:96, the topical components were parent/family involvement in education and civic involvement. The NHES:96 expanded screening feature included a set of questions on public library use.

In addition to its topical components, the NHES system has also included a number of methodological investigations. These have resulted in technical reports and working papers covering diverse topics such as telephone undercoverage bias, proxy reporting, and sampling methods. This series of technical reports and working papers provides valuable information on ways of improving the NHES.

This working paper presents information on unit response, weighting, item response, and imputation in the 1993 National Household Education Survey. Readers may also wish to review the following working papers: *Design, Data Collection, Monitoring, Interview Administration Time, and Data Editing in the 1993 National Household Education Survey* (Brick et al. forthcoming); *Telephone Coverage Bias and Recorded Interviews in the 1993 National Household Education Survey* (Brick et al. forthcoming); and *Comparison of Estimates in the 1993 National Household Education Survey* (Collins et al. forthcoming), for additional information on the survey. Comparable working papers are being prepared for the NHES:95 and the NHES:96.

NHES:93 Design

The 1993 National Household Education Survey (NHES:93) addressed readiness for school and safety and discipline in school. These topics are related to two of the National Education Goals. Specifically, Goal 1 states that "By the year 2000, all children in America will start school ready to learn." Goal 7 states that "By the year 2000, every school in America will be free of drugs and violence and will offer a safe, disciplined environment conducive to learning."

The School Readiness (SR) component covered experience in early childhood programs, the child's accomplishments and difficulties in several developmental domains, school adjustment and related problems, delayed kindergarten entry, and early primary school experiences including repeating grades, the child's general health and nutritional status, home activities, and family characteristics such as stability and economic risk factors. Altogether, 10,888 children aged 3 through 7 or in 2nd grade or below were sampled. Interviews were conducted with 4,423 parents of preschool children, 2,126 parents of kindergartners, 4,277 parents of primary school children, and 62 parents of home school children. For further information on the content of the SR component, see *National Household Education Survey of 1993: School Readiness Data File User's Manual* (Brick et al. 1994).

The School Safety and Discipline component (SS&D) focused on four areas: school environment, school safety, school discipline policy, and alcohol/other drug use and education. The SS&D interview gathered general perceptions of the school learning environment from both parents and students. Parents of 12,680 children in 3rd through 12th grades were interviewed, as were 6,504 students in 6th through 12th grades. For further information on the content of the SS&D component, see *National Household Education Survey of 1993: School Safety and Discipline Data File User's Manual* (Brick et al. 1994).

The NHES:93 was developed to provide reliable estimates for each of the two different topical components described above. The inclusion of two survey components made the overall survey more cost effective, thus allowing for larger sample sizes and more precise estimates. This strategy was key to the NHES design. By including more than one topic within the framework of a single survey, the cost of screening households to find those eligible for the study could be partitioned over the component surveys.

It was possible that the same household member could be selected to respond to more than one interview and/or that more than one household member could be sampled. For the SR interview, if there were one or two eligible children in the household, interviews were conducted for those children. If the household included more than two eligible children, two children were randomly sampled from that household. For the SS&D interview, if a household had one eligible youth, that youth was selected

with a probability that depended on his/her grade (students in grades 3 through 5 were selected with a lower probability than those in grades 6 through 12). If a household had two or more eligible youths, the sampling depended upon the number of youths in the household in each of the two grade categories. A maximum of two youths was selected from any household for the SS&D component, one from the lower grades and one from the upper grades.

Even though sampling methods reduced the number of interviews per household, the length of the interview was considered to be a critical factor in obtaining high response rates and reliable estimates. Therefore, the number of items included in the NHES:93 was limited in order to help improve response rates and reduce the demands made on survey respondents.

Because of the above requirements, complex sampling techniques, and the need for quick and accurate administration, the NHES:93 was conducted using computer assisted telephone interviewing (CATI) technology. Some of the advantages of CATI for the NHES:93 included improved project administration, online sampling and eligibility checks, scheduling of interviews according to a priority scheme to improve response rates, managing data quality by controlling skip patterns and checking responses online for range and consistency, and an online "help" function to answer interviewers' questions.

Three different interview instruments were used in the NHES:93. These instruments were the Screener, the SR interview, and the SS&D interview. Items within each of the three instruments were programmed so that the appropriate items appeared on the interviewer's computer screen corresponding to the respondent's answer to previous queries. These instruments are discussed in detail in *National Household Education Survey of 1993: School Readiness Data File User's Manual* (Brick et al. 1994) and *National Household Education Survey of 1993: School Safety and Discipline Data File User's Manual* (Brick et al. 1994).

Unit Response in the NHES:93

This section describes the response rates and completion rates for the NHES:93. It includes data on these rates for the Screener interview, the extended School Readiness interview, and the extended School Safety and Discipline interviews broken down by the three different paths (parents of 3rd to 5th graders, parents of 6th to 12th graders, and youth in 6th to 12th grade). In addition, it contains more details on the outcomes of the sampling and data collection than are available in the Data File User's Manuals prepared for the two components.

Since this presentation is more detailed, it also assumes the reader is familiar with the survey design and, to a lesser extent, the weighting procedures used in the NHES:93. Other documents are available that describe these aspects of the NHES:93. A quick and useful overview of these topics is given in section 3 of the Data File User's Manuals. The working paper *Design, Data Collection, Monitoring, Interview Administration Time, and Data Editing in the 1993 National Household Education Survey* (Brick et al. forthcoming) provides additional detail on the design, and a subsequent section of this report discusses weighting procedures.

Because there are a number of ways to describe the outcomes of the data collection activities of a random digit dial (RDD) telephone survey, the next section provides an introduction to the terms "response rate" and "completion rate" as used in this document and for the NHES:93 in general.

Definition of Response and Completion Rates

A response rate is the ratio of the number of units with completed interviews (the units could be telephone numbers, households, or persons) to the number of units sampled and eligible for the interview. In some cases, these rates are easily defined and implemented, while in other cases the numerators or denominators of the ratio must be estimated.

For reporting the results from the NHES:93, the response rate indicates the percentage of possible interviews completed taking all sampling stages into account, while the completion rate measures the ability to complete interviews for a specific stage of the survey. For example, household members are identified for extended interviews in a two-stage process. Screener interviews are conducted to enumerate and sample household members, and then extended questionnaires are administered to the sampled members. If the responding household member fails to complete the first stage Screener, the extended interview cannot be conducted in the household. In this case, the completion rate for the second stage is the percentage of sampled persons with completed interviews. The response rate is the product of the first and second stage completion rates.

Response and completion rates can be either unweighted or weighted. The unweighted rate is computed using the raw number of cases. It provides a useful description of the success of the operational aspects of the survey. The weighted rate is computed by summing the weights (usually the reciprocals of the probability of selecting the units) for both the numerator and denominator of the rate. The weighted rate gives a better description of the success of the survey with respect to the population sampled. For the NHES:93, the weighted and unweighted rates are very close to each other, primarily because the probabilities of selection did not differ substantially across sampled units.

Response rates and completion rates are identical for the first stage of sampling and interviewing (i.e., the Screener). The next section discusses the response rate (which is also the

completion rate) for the Screener and provides a profile of the characteristics of the respondents. The response and completion rates for the extended interviews are discussed next.

Screener Response Rates

The first panel of table 1 gives the disposition of the 129,813 telephone numbers that were sampled for the NHES:93. The three major categories of response status are those identified as numbers for residential households, those identified as nonresidential numbers (primarily nonworking and business telephone numbers), and those numbers that, despite numerous attempts, could not be identified as residential or nonresidential. The percentage of telephone numbers with unknown residential status was 3 percent, which is consistent with the 3 to 5 percent typically found in other RDD studies done by Westat. The 59 percent residential status reported in table 1 is also consistent with other Westat RDD projects in which the residential rate is approximately 60 percent.

The second panel of table 1 shows four estimated response rates for the Screener, based upon different assumptions about the telephone numbers. Each of these rates is described below, along with the rationale for its use. The primary difference across the rates is in the allocation of the numbers with unknown residential status.

The first method is the business office method, so called because of the technique used to estimate the denominator of the rate. After drawing a random sample of the telephone numbers with unresolved residency status, the numbers are classified as either residential or nonresidential by contacting local telephone companies. This check with business offices was last conducted in 1991, and at that time approximately 40 percent of the sampled numbers were residential. Telephone numbers with unresolved residential status were allocated using this rate when calculating response rates. Therefore, the denominator of the business office method is all the telephone numbers that are known to be residences plus 40 percent of the numbers with unresolved residential status [77,878 =76,093+(0.40 x 4,462)] weighted by the probability of selecting the telephone number. The numerator is the number of telephone numbers in households that participated in the survey (63,844) weighted by the probability of selecting the telephone number. Note that other factors involved in computing the full probability of selection (e.g., the number of phones in the household) are not available for nonrespondents, and thus the weight is not exactly the inverse of the probability of sampling the household.

The weighted Screener response rate using the business office method is 82.1 percent. If the raw count of the telephone numbers is not weighted, the Screener response rate using the business office method is 82 percent. The weighted Screener response rate of 82.1 percent, which is recommended for general use, is used in all the subsequent presentations.

The other three response rates shown in table 1 were computed from unweighted counts by allocating different proportions of the numbers with unknown residency status into the residential category. The CASRO (Council of American Survey Research Organizations) rate is computed by allocating the numbers with unknown residency status in the same proportion observed in the numbers with known residential status (that is, 76,093/129,813 = 59 percent). Since evidence from a sample of 400 numbers with unresolved residential status from the NHES:91 suggests that the residency rate for these numbers is lower, we do not recommend using this assumption in the response rate calculation. The CASRO rate is 81.0 percent.

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The conservative and liberal response rates define the lower and upper bounds on the response rate. The conservative response rate is computed assuming that all of the numbers with unknown residential status are actually residential numbers. The conservative rate is 79.3 percent. The liberal rate is computed assuming that all the numbers with unknown residential status are actually nonresidential. The liberal rate is 83.9 percent.

For general purposes, it is reasonable to say that the Screener response rate is estimated to be between 79 and 84 percent, and the best estimate is 82 percent. The variability in the estimates arises because it is not possible to identify precisely the residential status for each telephone number.

Table 2 provides a further breakdown of the telephone numbers that have already been separated into the categories of participating and nonparticipating. The participating numbers are classified by whether or not extended interviews were scheduled for the household and the nonparticipating numbers are classified by the reason for nonresponse. Extended interviews were scheduled for 30 percent of the screened households.

Nearly two-thirds of all the nonresponse was due to an adult household member refusing to answer the screening items. The next largest category is the 15 percent classified as maximum calls. This category includes those households that never completed the Screener after seven or more calls to the household. These households never explicitly refused to participate, but they were not available to complete the screening items in at least seven attempts to reach them. Language problems account for 7 percent of nonresponse, and other problems made up another 10 percent. By comparison, in the NHES:91, 84 percent of Screener nonresponse was due to refusals, 7 percent to maximum calls, 4 percent to language problems, and 5 percent to other problems.

Table 3 shows the number of households in which at least one extended interview was scheduled by the type of extended interview. Nearly half of the households had only School Safety and Discipline interviews scheduled, about one-third had only School Readiness interviews, and less than 20 percent had both types of interviews.

Profile of Screener Response Rates

In most RDD surveys, it is very difficult to obtain and examine the characteristics of those households that do not respond to the screening interview. Consequently, the ability to examine nonresponse bias at this stage of the survey is limited. For the NHES:93, we have associated two characteristics with all 129,813 telephone numbers sampled. The first characteristic is Census region, based on the telephone exchange. The second characteristic is minority concentration for the cluster. This is the variable used for oversampling clusters with high concentrations of black or Hispanic or Asian/Pacific Islander residents. The telephone number is considered a high minority concentration number if over 20 percent of the population living in that exchange was black, 20 percent was Hispanic, or 20 percent was Asian/Pacific Islander in the 1990 Census.

Table 4 gives the estimated response rates for the 129,813 telephone numbers by these characteristics. The differences in the rates by both region and minority concentration are relatively small. The Screener response rates in the Northeast and West regions are lower than those in the Midwest and South. These differences are about 6 percent, ranging from 79 percent to 85 percent.

The variation by minority concentration is even less pronounced than that associated with region. The difference in response rates between the high and low minority areas is about 1 percent. This difference should not be equated with the racial composition of respondents and nonrespondents. In fact, in some of the high minority areas 80 percent or more of the population may be nonminority persons since the areas were defined based on 1990 Census data and high minority areas were only required to have at least 20 percent of one minority group at that time. The racial composition of the nonrespondents cannot be ascertained without additional data collection.

The profile of response rates by these characteristics shows that there is little variation in the response rates. Although the bias introduced by the variation in response rates cannot be directly measured without examining the impact of the estimation procedures, these two variables do not reveal any major problems. Nevertheless, nonresponse of 18 percent is a potential source of significant bias.

Language Problem Resolution

The NHES:93 was conducted primarily in English, but provisions were made to make it possible to interview persons who spoke only Spanish. The questionnaires were translated into Spanish, a Spanish version of the CATI instrument was programmed, and bilingual interviewers were trained to complete the interview in either English or Spanish.

When a telephone number is dialed in an RDD survey, the person answering the telephone can be someone who is not able to speak English. These contacts are typically coded by interviewers as "language problem" cases on the LANGPROB screen and classified as a hearing or speech problem or a language other than English. If the respondent speaks a language other than English and the interviewer recognizes that language, it is recorded on the WHATLANG screen.

In the NHES:93, once a case was classified as a language problem, it was placed in a separate work category so that only trained, bilingual interviewers could access it for followup calls. When a bilingual interviewer encountered a Spanish-speaking respondent, the interviewer immediately began to conduct the interview in Spanish. These cases were coded as having been worked in Spanish.

Language problem cases include a wide range of situations that result from a non-English-speaking person (or a speech or hearing impaired person) answering the telephone. For example, some households have members who speak English and other members who do not. In this case, the classification of the household as a language problem may depend on who answers the telephone for a specific call. Another possibility is that all household members may speak English, but the telephone might be answered on some occasions by a person who does not live there and does not speak English. A second call to the household might be answered by an English-speaking household member.

The results for Screener interviews that were ever classified as having a language problem are presented in table 5. The table is divided into three sections. The first section gives the results for those cases ever classified as having a hearing or speech problem. The second and third sections are for language problem cases other than hearing or speech problems. The second section includes cases in which the initial interviewer reported that he or she thought the respondent was speaking Spanish. The third section includes cases in which the initial interviewer reported that the respondent was speaking a language other than Spanish or English. It should be remembered that the interviewers were not trained to recognize the language of the respondent; they were merely asked to record what they thought the language spoken might have been.

There were 831 Screeners that were classified by at least one interviewer as a hearing or speech problem. About two-thirds of these cases were eventually completed, either because another household member answered the phone or because the interviewer initially misclassified the case.

The completion rate for cases classified by the initial interviewer as Spanish-speaking is nearly the same as the overall completion rate for the Screeners. About 81 percent of all these cases were finalized as complete. Approximately five times as many of these cases were completed in Spanish as in English. This suggests that the interviewers did a reasonable job of identifying the non-English language spoken by the respondents.

The last section of table 5 reveals that the completion rate for those identified as speaking some language other than English or Spanish was very low. Only a third of the Screeners in this class were completed, about an equal number in Spanish and English. This low completion rate was expected since the interview was designed to be conducted only in English and Spanish.

In addition to the cases that were classified as language problem cases, 33 Screeners were worked in Spanish by the initial interviewers, and accordingly never classified as language problem cases. Of the 33 cases, 30 were completed, 2 were refusals, and 1 was classified as "other problem."

Extended Interview Response Rates

During the screening interview, all household members were enumerated if any child in the eligible age range lived there. At this time, the sample of children within the household was selected, and the person who was most knowledgeable about the child's care and education was identified. In most cases, a parent of the child was the respondent. For School Safety and Discipline, a subsample of 6th to 12th graders was selected and interviewed, but only after the interview with the parent of the 6th to 12th grader was completed. Completed parent interviews were required prior to youth interviews because interviewing minors on the telephone may be a sensitive issue for some parents. Thus, parental consent was obtained prior to speaking with youth.

Table 6 presents the number of children enumerated, the number sampled, and the final status of each of the sampled children, along with the weighted completion and response rates. Of the enumerated 13,342 children eligible for sampling in the School Readiness component, a sample of 12,905 children was selected. Since the study design precluded conducting more than two School Readiness interviews in the same household, some eligible children were not sampled. About 5 percent of the sampled children were not yet old enough for the survey and were classified as ineligible. Complete interviews were obtained from 10,888 of the parents of the sampled children for a 90 percent completion rate. When multiplied by the Screener response rate, the overall weighted response rate for the School Readiness interview is 74 percent.

The School Safety and Discipline figures are presented separately for each of the three major sampling paths. The first path is for parents of 3rd to 5th graders. About 45 percent of all enumerated 3rd to 5th graders were sampled, and almost all of those sampled were eligible for the interview (those excluded as ineligible were not enrolled in school or were eligible for the SR component because they were in 2nd grade). In all, 2,563 interviews were completed with parents of 3rd to 5th graders. The completion rate for the 3rd to 5th grade path is 89 percent and the response rate is 73 percent.

The second SS&D path is for parents of 6th to 12th graders. Nearly three out of four of the enumerated 6th to 12th graders were sampled, and less than 2 percent of those sampled were ineligible for the interview, because they were not enrolled in school or were older than age 20 as of December 31, 1992. The completion rate for the interviews with parents of 6th to 12th graders is 90 percent and the response rate is 74 percent, including emancipated youth.

The last SS&D path is for the subsample of 6th to 12th graders who were selected to be interviewed about their own experiences. Emancipated youth are included in these counts for the youth interviews. Nearly 70 percent of the 6th to 12th graders that were sampled for the parent interview during the Screener were also sampled for the youth extended interview. Those found to be ineligible during the parent interview were automatically designated as ineligible for the youth interview. The completion and response rates for this path, 83 percent and 68 percent, respectively, are lower than for other interview paths, but are still quite good.

The reasons for nonresponse for the various components and paths are presented in table 7. The School Readiness nonresponse was primarily the result of the parent refusing to answer the extended interview questions (59 percent of nonresponse). The other relatively large reason for nonresponse in this component was the inability to reach the parent or guardian who was most knowledgeable about the child's care and education to conduct the interview. Language and other miscellaneous problems accounted for only 12 percent of the total nonresponse. An example of a miscellaneous problem is the case of a child whose presence in the household is denied at the time of a callback for the extended interview.

The same general results were obtained for the School Safety and Discipline interviews with the parents of 3rd to 5th graders and parents of 6th to 12th graders. About 63 percent of the nonresponse in both paths was due to refusals, and about 26 percent was due to the inability to contact the respondent at a convenient time to complete the interview. The other types of nonresponse were very small, accounting for only 10 to 12 percent of the total.

The reasons for nonresponse are more complicated for the subsample of 6th to 12th graders who were selected for youth interviews. Nearly half of the nonresponse in this path was due to the fact that the parent interview for the 6th to 12th grader was not completed, and the interview with the youth could not be scheduled until that occurred. Another major reason for nonresponse for the youth interview was due to parents who completed the parent interview, but then refused to allow the youth to be interviewed. When these two forms of parent nonresponse are added together, they account for 72 percent of the total nonresponse for the youth interviews. The other forms of nonresponse, including the youth refusing to complete the interview, not reaching the youth to complete the interview, language problems, and other miscellaneous reasons, account for the remaining 28 percent of the nonresponse.

The completion rates for all the components were relatively good (see table 6). For the School Readiness interview, the completion rate of 89.6 percent is lower than the 94.5 percent completion rate experienced in the NHES:91 Early Childhood Education (ECE) component. More detailed data were collected in the NHES:93 and the time to complete the interview was therefore increased (the mean interview time for the NHES:91 was 12.2 minutes; the mean interview time for the NHES:93 SR component was 21.5 minutes), which may be a factor in the lower completion rates. Because all eligible children were selected in the NHES:91, and up to four eligible children were selected in the NHES:93, the scheduling of multiple interviews per household, by itself, does not account for the difference. The importance of a relatively brief interview, especially when more than one interview is conducted per household, is apparent.

The rates for the School Safety and Discipline interviews are not directly comparable to other NHES experiences, since this is the first time the NHES has covered this range of grades. Perhaps the best comparison is between the rates for the NHES:93 and the 1989 Field Test of the NHES. In the Field Test, youth aged 14 to 21 years were interviewed, with a completion rate of 86 percent and an overall response rate of 66 percent. When compared to these rates, the NHES:93 rates for the 6th to 12th grade interviews with youth are quite good. In the Field Test, parents of the 14- to 21-year-olds were not asked to permit the child to be interviewed. Since most of the nonresponse in the NHES:93 was due to this source, the overall response rate for the youth interviews is particularly good.

Despite the relatively good completion and response rates, there is room for improvement. The nature of the extended interviews in the NHES:93 changed somewhat from the NHES:91. In previous work, the major focus of the response analysis was on the Screener because the completion rates for the extended interviews were so high. With the completion rates slightly lower in 1993, it would be useful to study the impact of the introductory questions in the extended interview with respect to their impact on completing the interview. The cognitive laboratory setting is probably the most appropriate mechanism for this study.

Another factor related to the extended interview completion rates is the number of interviews sampled per household. Table 8 shows the number of households sampled for the NHES:93 and the distribution of households by the number of interviews sampled for each component.

In nearly two-thirds of the sampled households, persons were sampled for more than one interview. About 45 percent of all the sampled households had exactly two interviews scheduled, and less than 20 percent had more than two interviews. The maximum number of interviews scheduled per household was two for School Readiness and three (two parent interviews and one youth interview) for School Safety and Discipline. This results in a maximum of five interviews per household over both components.

Table 9 shows the same type of distribution as table 8, but this time by the number of extended interviews that were actually completed in a household. The emancipated youth interviews are only counted once in this table, since the purpose of the table is to explore response burden and the emancipated youth completed only one interview. Please note that three School Readiness interviews were completed in two households, even though the maximum number sampled per household was two. This occurred when one of the children sampled for the School Safety and Discipline interview turned out to be eligible for the School Readiness interview instead.

More than one extended interview was completed in about 50 percent of all households sampled for extended interviews, with exactly two interviews completed in 38 percent of the sampled households. Having one completed extended interview was more common for households sampled for School Readiness than for those sampled for School Safety and Discipline; those households in which children were sampled for SR were less likely to have more than one eligible child, since the age range was narrower.

It is difficult to draw any specific conclusions about the impact of multiple interviews in a household based on the results in table 8 and table 9. The ratio of the number of households with completed interviews to the number of households with sampled interviews is lower for households with more sampled interviews. This does not imply that the completion rate in such households is lower, since completion rates cannot be computed this way. Multiple interviews per household will continue to be a feature of the NHES. These results are presented merely to raise the issue of response burden at the

household level and suggest that methods to reduce it (sampling and limiting the length of the interview) need to be continually re-evaluated. The survey literature is replete with discussions of the impact of longer interviews on response rates, and multiple interviews per household are related to this, even if the direct impact cannot be evaluated.

Profile of Extended Interview Completion Rates

The extended interview completion rates can be examined by three variables that are available for both respondents and nonrespondents. The three variables are Census region (based on the telephone area code), age of the child, and grade (if enrolled in school) of the child. The age and grade of the sampled child were collected during the Screener.

Tables 10 through 13 display the weighted completion rates for School Readiness and School Safety and Discipline by these variables. The School Safety and Discipline counts are reported separately for the parents of 3rd to 5th graders, parents of 6th to 12th graders, and the 6th to 12th graders themselves. The completion rates are remarkably constant across all three variables for each component and major path. The completion rates are consistently lower in the West than in other regions, but the difference is not substantial. While the Screener response rate for the Northeast was lower (79 percent) than for the Midwest and South (84 percent and 85 percent, respectively), this is not the case for the extended interviews. It appears that, once a Screener is completed, within-household cooperation in the Northeast is more similar to the Midwest and South.

For the School Safety and Discipline interviews with parents of 6th to 12th graders and the youth themselves, the relatively constant completion rate by age and grade of the child is very interesting. One of the questions raised in developing the survey was whether it would be possible to interview children as young as 11 or 12 years old. It was anticipated that parents of these younger youth would refuse permission for the youth survey more often than parents of older youth, and that the younger youth themselves may be more reluctant to participate. However, the completion rates in table 13 suggest that the effort to interview youth of each grade was successful. The completion rates for 6th, 7th, and 8th graders are about 1 percent less than the overall average. Most of the nonresponse to the youth interview (almost three-fourths) was due to parents either not completing the interview or refusing to allow the child to be interviewed.

Other measures of the quality of the extended interviews will be examined later to determine if the interviews with the youths were as valuable as desired. For example, the questions about whether or not the child was able to answer the questions in private may reveal other features of these interviews. Nevertheless, the results based on completion rates are very positive for this aspect of the survey.

Table 1.--Number of telephone numbers dialed, by residential status and Screener response rate

Screener response category	Number	Percentage of all numbers	Percentage of residential numbers
Total	129,813	100.0	
Identified as residential	76,093	58.6	100.0
Participating	63,844	49.2	83.9
Not participating	12,249	9.4	16.1
Identified as nonresidential	49,258	38.0	
Unknown residential status	4,462	3.4	
Screener response rates*	Rate (Percent)		
Estimated response rate (using business office method)	82.1		
Weighted response rate (using business office method)	82.0		
CASRO response rate	81.0		
Conservative response rate	79.3		
Liberal response rate	83.9		

*All the response rates (except the weighted method) use the number of participating households as the numerator. The denominators vary: for the estimated response rate using the business office method, the proportion of unknown residential status numbers included in the denominator was based upon the proportion identified in checks with telephone business offices; for the CASRO (Council of American Survey Research Organization) response rate, the proportion of unknown residential status numbers included in the denominator was based upon the residency rate for the numbers with known residential status; for the conservative response rate, all of the unknown residential status numbers were included; for the liberal response rate, none were included. The weighted response rate uses the same procedures as the business office check method, except the counts were adjusted by the probability of selection.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1993.

Table 2.--Number and percent of telephone households, by weighted Screener response status

Screener response category	Number	Percent
Participating residential phone numbers	63,844	100.0
Households with no extended interviews scheduled	44,426	69.6
Households with at least one extended interview scheduled	19,418	30.4
Not participating residential phone numbers	12,249	100.0
Refusals	8,297	67.7
Language problems	832	6.8
Maximum calls	1,790	14.6
Other problems	1,330	10.9

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1993.

Table 3.--Number and percent of participating households, by type of interviews scheduled

Type of interview scheduled	Number of households	Percent
Total	19,418	100.0
Only School Readiness interviews scheduled	6,589	33.9
Only School Safety and Discipline interviews scheduled	9,392	48.4
Both School Readiness and School Safety and Discipline interviews scheduled	3,437	17.7

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1993.

Table 4.--Number of telephone numbers dialed in the Screener, by response status, weighted response rate and household characteristics

Characteristic	Total	Residential		Non-residential	Unknown residential status	Weighted* response rate (%)
		Participating	Non-participating			
Total	129,813	63,844	12,249	49,258	4,462	82.1
Census region						
Northeast	24,780	11,810	2,697	9,169	1,104	79.4
Midwest	27,540	13,953	2,364	10,308	915	84.0
South	48,189	24,609	3,885	18,280	1,415	84.7
West	29,304	13,472	3,303	11,501	1,028	78.5
Minority Concentration						
Low minority	69,834	35,234	6,524	25,554	2,522	82.4
High minority	59,979	28,610	5,725	23,704	1,940	81.5

*The weighted response rate is the number of participating households divided by the sum of the number of participating households, nonparticipating households, and 40 percent of the unknown residential telephone numbers, weighted by the probability of selection.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1993.

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Table 5.--Language Problem Screener interviews, by weighted response status

Problem	Number	Percent
Hearing/Speech Problems		
Total	831	100.0
Completed in English	539	64.9
Completed in Spanish	27	3.2
Refusals	90	10.8
Language Problems	175	21.1
Identified as Spanish-speaking		
Total	1,569	100.0
Completed in English	199	12.7
Completed in Spanish	1,070	68.2
Refusals	94	6.0
Language Problems	189	12.0
Other	17	1.1
Identified as Other Language		
Total	806	100.0
Completed in English	137	17.0
Completed in Spanish	127	15.8
Refusals	68	8.4
Language Problems	470	58.3
Other	4	0.5

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Study (NHES), spring 1993

Table 6.--Number of enumerated children, completed interviews, and weighted completion and response rates, by type of extended interview

Type of interview	Number	Weighted completion rate	Weighted response rate
School Readiness interviews			
Enumerated	13,342		
Sampled[1]	12,905		
Ineligible	612		
Nonresponding	1,405		
Complete[1]	10,888	89.6	73.6
School Safety and Discipline interviews			
Parents of 3rd to 5th graders			
Enumerated	6,384		
Sampled[2]	2,882		
Ineligible	9		
Nonresponding	318		
Complete[1]	2,555	89.4	73.4
Parents of 6th to 12th graders			
Enumerated	15,667		
Sampled[2]	11,650		
Ineligible	199		
Nonresponding	1,249		
Complete[2]	10,202	89.6	73.6
Youth in 6th to 12th grade			
Enumerated	15,667		
Sampled	8,066		
Ineligible	138		
Nonresponding	1,424		
Complete	6,504	83.0	68.1

NOTE: The classification of cases that were sampled for a given path but later completed in a different path is a complex process. The procedures used here, while not completely consistent, are considered to be reasonable. Different classification schemes for this small number of cases are possible, but have no significant effect on response rate calculations. The completion and response rates reported in the table are based on the numbers provided in the table. Cases shown as being reclassified (see footnote 1 and 2) represent net figures. Based on the design of the survey instrumentation, it is reasonable to assume that reclassification happened in only a very small number of cases.

[1]The number of completed SR interviews (10,888) includes 21 completed interviews for children sampled for SS&D who were actually eligible for the SR component. The number sampled (12,905) only includes those sampled for SR, and does not include the 21 cases sampled for SS&D but completed as SR interviews.

[2]The number of completed SS&D interviews only includes those sampled for the specific path. The actual numbers of completes are 2,563 completes for parents of 3rd to 5th graders and 10,194 completes for parents of 6th to 12th graders, including emancipated youth. The number of cases sampled for parents of 3rd to 5th graders (2,882) includes 21 cases originally sampled for this path that were actually eligible for and completed as SR interviews. The number of cases sampled for interviews with parents of 6th to 12th graders (11,650) includes 8 cases which were sampled for this path that were later completed in the 3rd to 5th grade path.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1993.

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Table 7.--Reasons for extended interview nonresponse, by type of interview and final status

Interview type and final status	Number	Percent
School Readiness		
Total	1,405	100
Refusal	823	59
Not available or not reached	410	29
Language problem	64	4
Other	108	8
School Safety and Discipline		
Parents of 3rd to 5th graders		
Total	318	100
Refusal	204	64
Not available or not reached	82	26
Language problem	21	7
Other	11	3
Parents of 6th to 12th graders		
Total	1,249	100
Refusal	771	62
Not available or not reached	323	26
Language problem	57	4
Other	98	8
Youth in 6th to 12th grade		
Total	1,424	100
Parent not completed	704	49
Parent refused youth interview	320	23
Youth refusal	146	10
Not available or not reached	223	16
Language problem	18	1
Other	13	1

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1993.

Table 8.--Number of households sampled for at least one extended interview, by the number of School Readiness and School Safety and Discipline interviews sampled

Number sampled for School Readiness	Total	Number sampled for School Safety and Discipline			
		0	1	2	3
Total	19,418	6,589	4,376	7,069	1,384
0	9,392	0	2,865	5,495	1,032
1	7,124	4,474	1,159	1,231	260
2	2,902	2,115	352	343	92

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1993.

Table 9.--Number of households sampled for at least one extended interview, by the number of School Readiness and School Safety and Discipline extended interviews completed

Number completed for School Readiness	Total	Number completed for School Safety and Discipline			
		0	1	2	3
Total	19,418	8,085	4,534	5,747	1,052
0	10,702	2,091	3,188	4,604	819
1	6,546	4,360	1,067	938	181
2	2,168	1,633	278	205	52
3	2	1	1	0	0

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1993.

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Table 10.--Number of sampled School Readiness interviews, by response status and weighted completion rates and by child characteristics

School Readiness interviews	Total sampled[1]	Complete[1]	Nonresponding	Ineligible	Weighted completion rate (%)
Total	12,905	10,888	1,405	612	89.6
Census region					
Northeast	2,191	1,869	231	91	91.0
Midwest	2,851	2,443	275	133	90.6
South	4,823	4,082	508	233	89.5
West	3,040	2,494	391	155	87.5
Age (Screener)					
3	2,312	1,527	201	584	91.7
4	2,296	2,046	234	16	90.1
5	2,358	2,088	266	4	89.2
6	2,257	1,970	285	2	88.1
7	2,381	2,110	267	4	89.3
8	1,213	1,077	134	2	89.9
9 or older	88	70	18	0	76.3
Grade (Screener)					
Not enrolled	3,263	2,453	319	491	90.5
Nursery/Preschool	2,372	2,024	235	113	90.3
Kindergarten	2,256	2,006	246	4	89.8
1st grade	2,437	2,135	301	1	88.5
2nd grade or higher	2,419	2,137	281	1	88.8
Other[2]	158	133	23	2	86.9

[1]The number of completed interviews includes those who completed the SR component, even if they were also sampled for the SS&D component.

[2]Other grades were primarily transitional kindergarten, prefirst, and special education.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1993.

Table 11.--Number of sampled 3rd to 5th graders for School Safety and Discipline parent interviews, by response status and weighted completion rates

School Safety and Discipline interviews	Total	Complete[1]	Nonresponse	Ineligible	Weighted completion rate (%)
Total	2,882	2,563	318	9	89.4
Census region					
Northeast	441	393	47	2	89.4
Midwest	673	614	60	3	90.7
South	1,127	1,002	121	4	89.8
West	641	554	90	0	87.3
Age (Screener)					
8 or younger	448	392	53	4	88.3
9	876	790	86	0	91.1
10	997	876	120	2	88.4
11 or older	561	505	59	3	89.6
Grade (Screener)					
3rd	956	859	97	0	90.2
4th	987	866	120	1	88.4
5th	905	805	98	4	89.7
Other[2]	34	33	3	4	90.5

[1]The number of completes includes those who completed the interview for 3rd through 5th graders, even if they were also sampled for SR or the older path of SS&D.

[2]Other grades include special education or ungraded.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1993.

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Table 12.--Number of sampled 6th to 12th graders for School Safety and Discipline parent interviews, by response status and weighted completion rates

School Safety and Discipline interviews	Total	Complete[1]	Nonresponse	Ineligible	Weighted completion rate (%)
Total	11,650	10,117	1,249	199	89.6
Census region					
Northeast	1,956	1,710	201	28	90.0
Midwest	2,617	2,294	249	52	90.6
South	4,637	4,059	480	68	89.8
West	2,440	2,054	319	51	87.5
Age (Screener)					
11 or younger	819	709	96	2	88.6
12	1,726	1,503	215	7	87.6
13	1,841	1,672	168	3	91.4
14	1,657	1,462	190	6	88.3
15	1,603	1,435	157	12	90.2
16	1,581	1,406	138	34	91.9
17	1,488	1,261	156	55	90.0
18	798	590	116	46	86.2
19 or older	137	79	13	34	89.6
Grade (Screener)					
6th	1,862	1,637	212	7	88.6
7th	1,846	1,643	197	7	89.7
8th	1,726	1,541	181	4	89.8
9th	1,610	1,420	174	13	89.3
10th	1,566	1,397	140	26	90.8
11th	1,455	1,253	145	43	91.0
12th	1,493	1,181	176	82	88.6
Other[2]	92	45	24	17	73.5

[1]The number of completes includes those who completed the interview for 6th through 12th graders, even if they were also sampled for the other path of the SS&D component. Emancipated youth are not included in these totals.

[2]Other grades include special education or ungraded.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1993.

Table 13.--Number of sampled 6th to 12th graders (including emancipated youth) for School Safety and Discipline youth interviews, by response status and weighted completion rates

School Safety and Discipline interviews	Total	Complete	Nonresponse	Ineligible	Weighted completion rate (%)
Total	8,066	6,504	1,424	138	83.0
Census region					
Northeast	1,341	1,085	237	19	82.4
Midwest	1,776	1,467	273	36	85.2
South	3,240	2,624	570	46	83.0
West	1,709	1,328	344	37	80.6
Age (Screener)					
11 or younger	574	462	103	9	82.6
12	1,187	949	232	6	80.7
13	1,301	1,085	212	4	84.8
14	1,164	942	217	5	81.9
15	1,075	899	169	7	85.0
16	1,094	889	180	25	84.6
17	1,018	806	181	31	83.0
18	557	412	116	29	78.7
19 or older	96	60	14	22	82.6
Grade (Screener)					
6th	1,292	1,043	239	10	81.7
7th	1,299	1,055	239	5	82.3
8th	1,207	991	213	3	82.8
9th	1,085	896	181	8	84.6
10th	1,093	912	164	17	85.6
11th	997	792	177	28	83.5
12th	1,035	800	183	52	81.9
Other*	58	15	28	15	50.7

*Other grades contain youth primarily classified as special education or ungraded.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1993.

Weighting and Estimation

The procedures used for producing the weights to estimate characteristics from the NHES:93 sample and to estimate sampling errors for those estimates are described in this section. The NHES:93 utilized a random digit dial (RDD) sample of telephone numbers in the 50 States and the District of Columbia conducted from January through April 1993. The objective of the sample was to make inferences about the entire civilian, noninstitutionalized population. For this reason, the estimates derived from the telephone households were adjusted to totals that include both telephone and nontelephone households.

The sample design of the NHES:93 is described in *Design, Data Collection, Monitoring, Interview Administration Time, and Data Editing in the 1993 National Household Education Survey* (Brick et al. forthcoming). A brief summary of the plan follows. The sampling method is a variant of the original Mitofsky-Waksberg method. The original method produces an equal probability sample of households with telephones, while the variant used for the NHES, referred to as the "modified Waksberg procedure," introduces some variation in these probabilities. In the modified approach, the number of telephone numbers per cluster, rather than the number of households, is fixed.

The sample was selected in a two-stage process. First, a sample of 4,577 clusters was identified. The clusters were sampled differentially, with clusters containing a high proportion (20 percent or more) of black, Hispanic or Asian households sampled at a higher rate than other clusters. Within each of these clusters a random sample of 32 additional (secondary) telephone numbers was selected without replacement. Based on the residency rate in residential clusters observed in past studies and the expected response rate, a sample of 64,000 participating households was expected without releasing all of the 32 secondary numbers. The additional numbers were sampled in the event that yields were lower than anticipated. Early in the data collection, all 32 secondary numbers were released and worked in some clusters. Only 26 secondary numbers were released and worked in each cluster after this problem was identified. The use of different numbers of secondary numbers in the clusters has no effect on the weighting procedures.

The School Readiness (SR) component included children between the ages of 3 and 7 years as of December 31, 1992 and all other children who were currently enrolled in kindergarten, first, or second grade (up to 9 years old). The parent or guardian who knew most about the child's care and education was interviewed. For the School Safety and Discipline (SS&D) component, interviews were conducted with both parents and students. Parents of children who were currently enrolled full-time in grades 3 through 12 (through age 20) were interviewed. The parent who knew the most about the education of the child was the respondent for this interview. In addition, students enrolled in grades 6 through 12 (generally, youth 11 to 20 years old) were interviewed. Because interviewing minors on the telephone may be a sensitive issue for some parents, only a student whose parent responded to the SS&D interview for that child was interviewed. An exception to this rule is an emancipated youth, who did not have a parent or guardian in the household.

The next part of this section describes the weighting procedure associated with the sample of telephone numbers. This weight is the basic building block for all subsequent weights. The weight is basically the inverse of the probability of selecting the household by the random digit dialing method used in this study. All of the subsequent weights are person-level weights, i.e., weights used to estimate the number of persons based on records of sampled children. The last part of this section describes the replicate weight production for variance estimation.

Cluster and Household Weights

The cluster weight is equal to the product of two weights; (1) the weight associated with the unequal number of households per cluster; and (2) the weight associated with the oversampling of high minority clusters. The household weight is equal to the cluster weight unless the household had more than one residential telephone number. If a household had more than one telephone number, then it could have been sampled from any of these numbers. The specifications for the cluster and household weights are given below.

1. To account for unequal probabilities of selection for households within clusters, we first calculated the average number of residential telephone numbers per cluster. This average is simply the total number of completed Screeners divided by the total number of clusters. Call the average $\bar{n}$. If n_i is the number of completed Screeners in the ith cluster, the cluster weight is equal to $\bar{n} / n_i$. If $\bar{n} / n_i$ was greater than 3, its cluster weight was replaced by 3.

   Let

   $$C_I = \min\{\frac{\bar{n}}{n_{i'}}, 3\}.$$

2. During sample selection, telephone clusters were divided into two groups, high minority clusters and low minority clusters. The low minority clusters included those that had an unknown minority status. High minority clusters were sampled at a rate twice as large as the low minority clusters. Therefore, high minority clusters are given a weight of 1/2. Low minority clusters are assigned a weight of 1.

   Let

   $L_i = 1$ if cluster i is a low minority cluster

   $L_i = ½$ if cluster i is a high minority cluster

   Then, the cluster weight CW_i is given by

   $CW_i = C_1 \times L_i$.

3. A weight of unity was assigned to households reporting one residential telephone number in the household. A weight of 0.5 was assigned to households with more than one residential telephone number.

   Let

   $I_{ij} = 1$ if household j in cluster i has one residential telephone number

$I_{ij} = ½$ if household j in cluster i has more than one residential telephone number[1]

The household level weight CHW_{ij}, is then equal to

$CHW_{ij} = CW_i \times I_{ij}$.

Person Weights for the SR Component

In sampling for the SR component of NHES:93, every sampled household that included a 3- to 7-year-old or other children currently enrolled in kindergarten, first, or second grade (up to 9 years old) was sampled with certainty. All of these children in the household were potential subjects for the SR interview. The parent or person most knowledgeable about the care and education of each child was asked to complete the interview for that child. The basic weight assigned to each selected child k in household j in cluster i in the sample is given below. The raking adjustment is described next.

1. The first step was weighting for the probability of sampling the child for the SR. A weight of unity was assigned to each selected child in a household with 1 or 2 SR eligible children. For households with 3 or more SR eligible children, the weight was the number of SR eligible children divided by the number sampled (2).

   Let

   $R_{ijk} = 1$ if SRCNT = 1 or 2

   $$R_{ijk} = \frac{SRCNT}{2} \text{ if SRCNT} = 3 \text{ or more,}$$

   where SRCNT is the count of SR eligible children in the household.

   For each eligible child the person weight is

   $RCHW_{ijk} = CHW_{ij} \times R_{ijk}$.

2. The next step was to adjust for nonresponse at the extended interview level. The nonresponse adjustment factor is given by

   $$A_1 = \frac{\sum_{k \in (R,NR)} RCHW_{ijk}}{\sum_{k \in (R)} RCHW_{ijk}}$$

   The numerator is the sum of all person records that are classified as either respondents (R) or nonrespondents (NR), while the denominator includes only the respondents. The nonresponse adjustment was done separately by the age of the sampled child. The factors varied from 1.09 to 1.14 across the ages.

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[1] The weight could be modified by a factor equal to the reciprocal of the number of residential telephone numbers in the household, but the adjustment by a factor of 2 is thought to be somewhat better. Massey and Botman (1988) comment on this adjustment in "Weighting Adjustments for Random Digit Dialed Surveys."

The nonresponse adjusted person weight (PW) for each child is

$PW_{ijk} = RCHW_{ijk} \times A_1$.

At this stage of the weighting process, the weight was set equal to zero for nonrespondents (these cases do not appear in the data file). The person-level weights were examined to see if there was substantial variability in the weights. Trimming of the weights was not deemed necessary.

3. The final weight used in the analysis of the SR data is PW adjusted to known totals using a raking procedure. Raking is used to adjust for any residual nonresponse and the undercoverage due to sampling only telephone households. Three dimensions were used for this raking. The first dimension was the cross of home type (rented/owned) and Census region, the second dimension was race/ethnicity crossed with household income categories, and the third dimension was age (i.e., ages 3 to 7, or age 8 and older but in second grade or less). The dimensions are listed in table 14, along with the totals. The control totals were taken from the October 1992 CPS file.

   The raked weights were formed by iteratively modifying the person weights so that they corresponded to the control totals. A table of estimates was formed using the person weights. The person weights were multiplied by the constant that forced the sum of the table values to equal the control totals along the first dimension. The revised table was then multiplied by the constant required so that the second dimension totals were obtained, and the same process was repeated for the third dimension. When the third dimension was completed, one iteration of raking was done. Further iterations were employed so that the estimates converged to the control totals across all three dimensions. The iterations continued until all the tabled totals were within 1 of the control totals across all dimensions.

   The final weight is given by

   $FPW_{ijk(c)} = PW_{ijk(c)} \cdot F_{ijk(c)}$

   where $F_{ijk(c)}$ is the raking adjustment factor that is the multiplicative factor described above, and c is the adjustment cell corresponding to the three dimensions of the control totals. Note that before the raking was done, all the variables given in table 14 were fully imputed. The public use data file contains the final weight. It is called FWGTO.

Person Weights for the SS&D Parent Component

In sampling for the SS&D component of the NHES:93, the 6th to 12th grade sample included those who were 21 years old or younger (those who were over age 20 on December 31, 1992 were classified as ineligible). The 3rd to 5th grade sample was limited to youth aged 15 or younger. Every sampled household that included a youth enrolled in the 3rd to 12th grade within these age limits was eligible. All of the youths in the household were potential subjects for the SS&D interview, but not all were sampled. The parent or person most knowledgeable about the education of each sampled youth was asked to complete the parent interview for that youth. SS&D parent component weights were also created for emancipated youth. This was to ensure that the sum of the parent weights equaled the total number of youths. (More information on the NHES:93 sample design is provided in the working paper

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Design, Data Collection, Monitoring, Interview Administration Time, and Data Editing in the 1993 National Household Education Survey.)

The basic weight assigned to each selected youth k in household j in cluster i in the sample is given below for younger (3rd to 5th grade) students (YSTD) and older students (OSTD) (6th to 12th grade). The raking adjustment is then described.

1. The first step was weighting for the probability of sampling the youth for the SS&D component. The sampling for this component depended on the count of YSTD and OSTD in the household; the counts are called CYSTD and COSTD, respectively.

   Students in grades 3 through 5 had a 45 percent chance of selection if there were one or two of these younger students in the household. If there were more than two 3rd to 5th graders in the household, then one was selected with equal probability. For younger students, let

   $D_{ijk} = 2.2$ if CYSTD = 1 or CYSTD = 2
   {since these youth had a 0.45 chance of being sampled within the household}

   $$D_{ijk} = \frac{CYSTD}{1} \quad \text{if CYSTD} > 2$$

   If there was only one child in 6th through 12th grade in the household, that child was sampled. If the household had two or more children in 6th through 12th grade, and no children in 3rd through 5th grade, then two 6th through 12th graders were sampled with equal probability. However, if the household had two or more children in the 6th through 12th grade and one or more children in 3rd through 5th grade, then exactly one 6th through 12th grader was sampled with equal probability. For older students, let

   $D_{ijk} = 1$ if COSTD = 1

   $D_{ijk} = 1$ if COSTD = 2 and CYSTD = 0

   $$D_{ijk} = \frac{COSTD}{2} \quad \text{if COSTD} > 2 \text{ and CYSTD} = 0$$

   $$D_{ijk} = \frac{COSTD}{1} \quad \text{if COSTD} > 1 \text{ and CYSTD} > 0$$

   For each eligible youth the person weight is

   $DCHW_{ijk} = CHW_{ij} \times D_{ijk}$.

2. The next step was to adjust for nonresponse at the extended interview level. Nonresponse adjustments were done separately for YSTD and OSTD to allow for differential nonresponse. The nonresponse adjustment factor is given by

$$A_1 = \frac{\sum_{k\varepsilon(R,NR)YSTD} DCHW_{ijk}}{\sum_{k\varepsilon(R)YSTD} DCHW_{ijk}} \quad \text{for YSTD}$$

$$A_2 = \frac{\sum_{k\varepsilon(R,NR)OSTD} DCHW_{ijk}}{\sum_{k\varepsilon(R)OSTD} DCHW_{ijk}} \quad \text{for OSTD}$$

where $DCHW_{ijk}$ equals the product of the household weight (CHW_{ij}) and the student weight (D_{ijk}). The numerator is the sum of all person records that are classified as either respondents (R) or nonrespondents (NR), while the denominator includes only the respondents. The nonresponse adjustments for the 3rd to 5th graders were done separately by the age of the sampled child. These adjustments varied from 1.11 to 1.13. The nonresponse adjustments for 6th to 12th graders were also done by the age of the sampled child and they varied from 1.09 to 1.15.

The nonresponse adjusted person weight for each youth is

$PW_{ijk} = DCHW_{ijk} \times A_1$ if YSTD

$PW_{ijk} = DCHW_{ijk} \times A_2$ if OSTD

The person-level weights were examined and trimmed to avoid substantial variability in the weights. Trimming was done on 42 cases for the 6th to 12th graders. The trimming involved replacing the PW with the PW at the 99 percentile distribution.

3. The final weight used in the analysis of the SS&D data is the PW adjusted to known totals using a raking procedure. Three dimensions were used for this raking. The first dimension crosses home type (rented/owned) and Census region, the second dimension crosses race/ethnicity and household income categories, and the third dimension is the count of youths age 7 to 20 years enrolled in school by grade. The raking was done separately for 3rd to 5th graders and 6th to 12th graders, using the same dimensions. The dimensions are listed in tables 15 and 16. The control totals for NHES:93 were taken from the October 1992 CPS file.

The raked weights were formed as done for the SR component. The iterations were continued until all the tabled totals were within 1 of the control totals across all dimensions.

The final weight is given by

$FPWP_{ijk(c)} = PW_{ijk(c)} \cdot F_{ijk(c)}$

where $F_{ijk(c)}$ is the raking adjustment factor that is the multiplicative factor described above, and c is the adjustment cell corresponding to the three dimensions of the control totals. The raked weight is called FWGTO on the public use file. Note that for the emancipated youth the parent level weight is called PFWGTO. It must be used in conjunction with the FWGTO weight for all other parents to arrive at the correct totals.

Person Weights for the SS&D Youth Component

Youth in grades 6 through 12 were sampled for a youth interview only if a parent interview had been completed about that youth or the youth was emancipated. The person weight calculated for the SS&D youth component was adjusted for the probability of selection and for nonresponse, and a raking adjustment was applied.

1. The first step was weighting for the probability of sampling the youth for the SS&D component. The sampling for this component depended on the number of sampled OSTD members. The PW weight from the parent component was the base weight that was adjusted in this case. If there was one sampled youth in grades 6 through 12, he/she had a probability of selection of 0.71 (the inverse of this probability is 1.4). If there were two sampled youth in grades 6 through 12, each had a probability of selection of 0.5 (the inverse of this probability of selection is 2). If the number of sampled OSTD members = 0, then no students were sampled for interviews. Therefore:

   $H_{ijk} = 1.4$ if number of sampled OSTD = 1

   $H_{ijk} = 2$ if number of sampled OSTD = 2

   The person weight for each eligible youth is:

   $HPW_{ijk} = PW_{ijk} \times H_{ijk}$.

2. The next step was to adjust for nonresponse at the extended interview level. The nonresponse adjustment factor is given by

$$A_1 = \frac{\sum_{k\varepsilon(R,NR)OSTD} HPW_{ijk}}{\sum_{k\varepsilon(R)OSTD} HPW_{ijk}}$$

   The numerator is the sum of all person records that are classified as either respondents (R) or nonrespondents (NR), while the denominator includes only the respondents. The nonresponse adjustments were done separately by the age of the youth. The adjustments varied from 1.18 to 1.26 across the ages.

   The nonresponse adjusted person weight for each youth is

   $PWY = HPW_{ijk} \times A_1$.

   The person-level weights were examined and trimmed. A total of 54 cases had their weights trimmed. They were assigned the person weight at the 99th percentile of the distribution.

3. The final weight used in the analysis of the SS&D youth data is the PWY adjusted to known totals using a raking procedure. The dimensions used for the 6th to 12th grade parent component were also used for raking the youth.

The iterations were continued until all the tabled totals were within 100 of the control totals across all dimensions.

The final weight is given by

$$FPWY_{ijk(c)} = PWY_{ijk(c)} \cdot F_{ijk(c)}$$

where $F_{ijk(c)}$ is the raking adjustment factor that is the multiplicative factor described above, and c is the adjustment cell corresponding to the three dimensions of the control totals. The final weight on the public use file is called FWGTO.

Replicate Weights for Computing Sampling Errors

The sampling errors for the NHES:93 were computed using the jackknife replication method (JK2). This method was chosen rather than JK1 because it is believed that it would provide slightly more degrees of freedom for the estimates. A description of both approaches to jackknifing can be found in *A User's Guide to WesVarPC, Appendix A* (Brick et al. 1996). With the JK2 method, the sample was divided into groups of replicates based upon the original telephone clusters. For each replicate, a replicate weight was developed using the same procedures used for the full sample weight. Estimates were then produced for each replicate using the replicate weight and compared to the full sample estimate in order to estimate the sampling error of the statistic.

Replicate weights were created for all three of the final weights: FPW, the SR raked person weight; FWGT0, the raked person weight for the SS&D parent component and youth component; and PFWGT0, the raked person weight for the SS&D emancipated youth when they are included in analyses with parent respondents. Because there are two full sample weights in the SS&D file, there are also two sets of replicate weights.

The procedures used to form the replicate weights are given below.

1. The clusters were sorted by low minority status (including unknown minority status) and high minority status, in the same order used in the initial sample selection (the list included all clusters).

2. Sixty variance strata were formed. Each variance stratum consisted of two PSUs. The clusters were assigned to variance strata of 1 to 60 sequentially, in pairs. The first cluster in the pair was assigned PSU = 1 and the second to PSU = 2.

3. Each respondent was then assigned 60 replicate weights. The procedure was the same for each of the components of the NHES:93. The first step was to assign each respondent a base weight equal to the person level weight prior to nonresponse adjustment (e.g., RCHW for the SR component). For each respondent one replicate weight was assigned to either 0 or 2 times the base weight, depending on the variance stratum and PSU.

4. Three base replicate weights were then adjusted for nonresponse using exactly the same procedures as described above for the full sample weights.

5. The nonresponse adjusted weights were then raked to the control totals. The raking was continued until each replicate weight was within 10 of the control total along every dimension. The final replicate weights are on the public use data file and they are called FWGT1 - FWGT60 for parent respondents and for youth respondents. When emancipated youth are analyzed along with parents, the appropriate replicate weights, to be used with the full sample weight PFWGT, are called PFWGT1 - PFWGT60.

Table 14.--NHES:93 control totals for School Readiness raking

Control characteristics		Control totals
Home type	**Census region**	
Owned or other	Northeast	2,400,545
Owned or other	Midwest	3,202,557
Owned or other	South	4,116,866
Owned or other	West	2,589,938
Rented	Northeast	1,448,553
Rented	Midwest	1,651,182
Rented	South	2,764,945
Rented	West	1,938,053
Race/ethnicity	**Household income**	
Hispanic	Less than $10,000	818,994
Hispanic	$10,000 - $24,999	904,880
Hispanic	$25,000 or more	685,193
Black, non-Hispanic	Less than $10,000	1,360,091
Black, non-Hispanic	$10,000 - $24,999	997,013
Black, non-Hispanic	$25,000 or more	792,487
Other	Less than $10,000	1,514,364
Other	$10,000 - $24,999	3,610,969
Other	$25,000 or more	9,428,649
Age	**Grade**	
3		3,905,387
4		3,806,845
5		3,832,330
6		3,763,999
7		3,809,885
8 and older	Second grade or less	994,193
Total		20,112,639

SOURCE: U.S. Bureau of the Census, Current Population Survey, October 1992.

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Table 15.--NHES:93 control totals for School Safety and Discipline grades 3, 4, and 5

Control characteristics		Control totals
Home type	**Census region**	
Owned or other	Northeast	1,365,545
Owned or other	Midwest	1,917,171
Owned or other	South	2,517,592
Owned or other	West	1,502,834
Rented	Northeast	703,985
Rented	Midwest	750,861
Rented	South	1,327,080
Rented	West	951,341
Race/ethnicity	**Household income**	
Hispanic	Less than $10,000	391,087
Hispanic	$10,000 - $24,999	543,235
Hispanic	$25,000 or more	384,834
Black, non-Hispanic	Less than $10,000	713,842
Black, non-Hispanic	$10,000 - $24,999	578,512
Black, non-Hispanic	$25,000 or more	447,442
Other	Less than $10,000	695,823
Other	$10,000 - $24,999	1,873,466
Other	$25,000 or more	5,438,529
Grade		
3		3,625,266
4		3,737,639
5		3,703,504
Total		11,066,409

SOURCE: U.S. Bureau of the Census, Current Population Survey, October 1992.

Table 16.--NHES:93 control totals for School Safety and Discipline grades 6 - 12

Control characteristics		Control totals
Home type	**Census region**	
Owned or other	Northeast	3,057,132
Owned or other	Midwest	4,566,749
Owned or other	South	6,111,995
Owned or other	West	3,430,432
Rented	Northeast	1,332,893
Rented	Midwest	1,362,420
Rented	South	2,418,423
Rented	West	1,780,412
Race/ethnicity	**Household income**	
Hispanic	Less than $10,000	651,297
Hispanic	$10,000 - $24,999	1,028,736
Hispanic	$25,000 or more	956,383
Black, non-Hispanic	Less than $10,000	1,233,092
Black, non-Hispanic	$10,000 - $24,999	1,351,475
Black, non-Hispanic	$25,000 or more	1,241,797
Other	Less than $10,000	1,249,480
Other	$10,000 - $24,999	3,832,049
Other	$25,000 or more	12,516,147
Grade		
6		3,829,328
7		3,671,410
8		3,514,377
9		3,500,559
10		3,335,873
11		3,124,956
12		3,083,953
Total		24,060,456

SOURCE: U.S. Bureau of the Census, Current Population Survey, October 1992.

Item Response in the NHES:93

In this section, item response rates are presented for the NHES:93 questionnaires. It is important to recognize that there are different ways of calculating item response rates, just as there are different ways of calculating unit response rates (discussed earlier in this paper). Under one view, item response is calculated with the entire sample as the denominator. Under another view, only those who actually received a given question are included in the denominator, but those who did not receive the question because of a skip pattern are omitted. The former approach was used in the NHES:93 to identify high nonresponse items in the imputation process (discussed in the next section). However, when calculating item response rates for the final, post-imputation data set, the rates are based on the number of respondents who actually received the question, and skipped respondents are omitted from the calculation of item response rates.

Item Response in the SS&D Parent Interview

For most of the items in the SS&D Parent interview, item response rates were very high. Nonresponse included "don't know," "refused," and "not ascertained." Most of the items in the Parent interview (80 percent of them) had response rates of 95 percent or more. Sixty-seven percent of the Parent SS&D items had response rates of more than 98 percent. Table 17 shows the response rates for all the questions in the SS&D Parent interview. The number of cases for which an item was asked and the percentage of cases for which a valid response was obtained are shown. The label for each item includes the question number.

Some of the items with low response rates asked about safety conditions at school and some were asked of a small number of respondents. For instance, parents who indicated that there were fighting gangs at their children's school were asked whether there was more than one gang at the school (PY48-SSGANNUM). Only about 23 percent of the respondents who were parents of students in 6th through 12th grade were asked that question and a relatively high proportion of those respondents did not know the answer. As discussed in the next section on imputation, special values were placed on the imputation flags for several of the variables so that analysts can identify "don't know" responses when these are of substantive interest.

When an interview was broken off after a major portion of the questions were answered and it was not possible to recontact the respondent to complete the remaining questions, the case was coded a "partial complete." In the SS&D Parent interview, this occurred if the interview was completed through question PY97 (COSCHOOL), which was the last question in the interview on the topic of school safety and discipline. There were 63 SS&D Parent interviews coded as partial completes. The item response rates do not decrease appreciably after this question, as these partial completes are proportionally a very small part of the total number of parent interviews.

Item Response in the SS&D Youth Interview

Item response rates were also very high in the SS&D Youth interview (table 18). Of the 96 items in that interview, 95 percent had item response rates of 95 percent or more, and 84 percent had response rates of 98 percent or more. Questions about gang activity at school (PY47-SSGANGS, PY48-SSGANNUM, and PY50-SSGANREL) had the lowest response rates, possibly the result of sensitivity about reporting this information. None of the Youth interviews were coded as a partial complete.

Table 17.--Item response rates in the School Safety and Discipline parent interview

Variable Name	Item number and label	Number eligible	Response rate
SEX	SUBJECT CHILD'S SEX	12,680	100.00%
DOBMM	P1-MONTH OF BIRTH	12,680	99.25%
DOBYY	P1-YEAR OF BIRTH	12,680	99.35%
RACE	P2-SUBJECT CHILD'S RACE	12,680	99.49%
HISPANIC	P3-SUBJECT CHILD IS OF HISPANIC ORIGIN	12,680	99.60%
ENROLL	P4-CHILD ATTENDING OR ENROLLED IN SCHOOL	12,680	100.00%
GRADE	P6-GRADE OR YEAR CHILD IS ATTENDING	12,680	100.00%
GRADEEQ	P7-GRADE EQUIVALENT FOR UNGRADED/SPEC ED	46	95.65%
MOMHOME	P8-TYPE OF MOTHER LIVING IN HH	12,680	99.98%
DADHOME	P9-TYPE OF FATHER LIVING IN HH	12,680	99.93%
SCPUBLIC	P10-PUBLIC OR PRIVATE SCHOOL	12,680	99.97%
SCASSIGN	P11-ASSIGNED OR CHOSEN SCHOOL	11,399	99.93%
SCCHURCH	P12-RELIGION-AFFILIATED SCHOOL	1,281	100.00%
SCREASON	P13-MAIN REASON CHILD ATTENDS THIS SCH	2,512	99.60%
SCNEIGH	P14-SCHOOL LOCATED IN NEIGHBORHOOD	12,680	99.91%
SCLOW	P15-LOWEST GRADE AT CHILD'S SCHOOL	12,680	98.70%
SCHIGH	P16-HIGHEST GRADE AT CHILD'S SCHOOL	12,680	99.20%
SCFIRST	P17-CHILD'S FIRST YEAR IN THE SCHOOL	12,680	100.00%
SCSTUD	P18-# OF STUDENTS AT CHILD'S SCHOOL	12,680	92.62%
SCSTUDGR	P18-# OF STUDENTS IN CHILD'S GRADE	160	100.00%
SCSAMETH	P19-PERCENTAGE STUDENTS OF CHILD'S RACE	12,680	94.62%
SCGENDER	P20-SCHOOL ENROLL BOYS, GIRLS, OR BOTH	12,680	99.99%
SECHALNG	PY21A-CHILD CHALLENGED AT SCHOOL	12,680	98.61%
SEENJOY	PY21B-CHILD ENJOYS SCHOOL	12,680	99.75%
SETEADIS	PY21C-TEACHERS MAINTAIN DISCIPLINE	12,680	97.88%
SERESPCT	PY21D-STDTS/TCHERS RESPECT EACH OTHER	12,680	97.70%
SEPRIDIS	PY21E-PRINCIPAL MAINTAINS DISCIPLINE	12,680	98.46%
SEWORKOK	PY22-FRIENDS THINK OK TO WORK FOR GRADES	12,680	96.49%
SEBEHVOK	PY23-FRIENDS THINK IT'S OK TO BEHAVE	12,680	97.44%
SEBEHPUN	PY24-WHY DO FRIENDS BEHAVE	11,567	92.29%
SEMISBEH	P25-MISBEHAVIOR INTERFERED WITH LEARNING	12,680	98.84%
SSSTEAL	PY26-THINGS STOLEN FROM LOCKERS OR DESKS	12,680	99.57%
SSSTEWOR	PY27-WORRIED ABOUT THEFT	5,559	99.05%
SSSTEYOU	PY28-THINGS STOLEN FROM CHILD	5,559	98.97%
SSFORCE	PY29-THINGS TAKEN BY FORCE OR THREAT	12,680	99.74%
SSFORSEE	PY30-CHILD SAW THINGS TAKEN BY FORCE	1,058	94.14%
SSFORWOR	PY31-CHILD WORRIED ABOUT FORCE	1,058	98.96%
SSFORYOU	PY32-CHILD HAD THINGS TAKEN BY FORCE	1,058	99.34%
SSFORWHR	PY33-WHERE FORCEFUL EVENT TOOK PLACE	300	98.33%
SSBULLY	PY34-STUDENTS BULLIED	12,680	98.65%
SSBULSEE	PY35-CHILD SAW BULLYING	4,905	94.13%
SSBULWOR	PY36-CHILD WORRIED ABOUT BULLYING	4,905	97.78%
SSBULYOU	PY37-CHILD WAS BULLIED	4,905	98.37%
SSBULWHR	PY38-WHERE CHILD WAS BULLIED	1,674	97.07%
SSATTACK	PY39-PHYSICAL ATTACKS TOOK PLACE	12,680	99.79%
SSATTSEE	PY40-CHILD SAW A PHYSICAL ATTACK	3,097	96.22%
SSATTWOR	PY41-CHILD WORRIED ABOUT ATTACKS	3,097	98.84%
SSATTYOU	PY42-CHILD WAS PHYSICALLY ATTACKED	3,097	99.64%
SSATTWHR	PY43-WHERE PHYSICAL ATTACK HAPPENED	539	98.89%

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Table 17.--Item response rates in the School Safety and Discipline parent interview--Continued

Variable Name	Item number and label	Number eligible	Response rate
SSINCDNT	P45-INCIDENTS INTERFERED WITH LEARNING	8,027	99.30%
SSRACIAL	PY46-ANY INCIDENTS RACIALLY MOTIVATED	6,764	93.73%
SSGANGS	PY47-ANY STUDENTS IN FIGHTING GANGS	10,117	89.52%
SSGANNUM	PY48-MORE THAN 1 GANG AT CHILD'S SCHOOL	2,377	72.74%
SSGANYOU	PY49-CHILD BELONGS TO A GANG	2,377	89.52%
SSGANREL	PY50-ANY INCIDENTS FROM GANG ACTIVITY	2,083	77.92%
SSWEAOTH	PY53-OTHER STUDENTS BRING WEAPONS	10,117	99.22%
SSTRAVEL	P54A-TOLD CHILD NOT TO GO A CERTAIN WAY	12,680	99.77%
SSTRANS	P54B-HAD CHILD USE DIFFERENT TRANSPRT	12,680	99.85%
SSCLOTHE	P54C-TOLD CHLD DON'T WEAR CERTAIN CLOTHE	12,680	99.89%
SSMONEY	P54D-SET LIMITS ON AMOUNT OF MONEY	12,680	99.89%
SSTALK	P54E-TALKED ABOUT HOW TO AVOID TROUBLE	12,680	99.98%
SSGUARDS	PY55A-SCHOOL HAS SECURITY GUARDS	12,680	95.78%
SSMETAL	PY55B-SCHOOL HAS METAL DETECTORS	12,680	92.26%
SSLOCKS	PY55C-SCHOOL HAS LOCKED DOORS	12,680	92.38%
SSVISITR	PY55D-SCHOOL REQUIRES VISITOR SIGN IN	12,680	95.35%
SSRESTRM	PY55E-LIMIT ON RESTROOM ACCESS	12,680	77.46%
SSHALSUP	PY55F-TEACHER SUPERVISION IN HALLWAYS	12,680	85.64%
SSLOCKER	PY55G-SCHOOL HAS REGULAR LOCKER CHECKS	12,680	78.27%
SSHALPAS	PY55H-HALL PASS REQUIRED TO LEAVE CLASS	12,680	94.19%
SDPOLICY	P56-SCHOOL HAS WRITTEN DISCIPLINE POLICY	12,680	95.13%
SDCOPY	P57-RECEIVED COPY OF POLICY	12,073	94.29%
SDSPANSH	P58-POLICY IN SPANISH	414	88.89%
SDDRUGS	P59-POLICY COVERS DRUGS	12,073	89.10%
TAGETCIG	PY62A-HOW EASY TO GET CIGARETTES AT SCH	10,117	95.34%
TAGETBER	PY62B-HOW EASY TO GET BEER/WINE AT SCH	10,117	94.56%
TAGETLIQ	PY62C-HOW EASY TO GET LIQUOR AT SCH	10,117	94.61%
TAGETMAR	PY62D-HOW EASY TO GET MARIJUANA AT SCH	10,117	90.78%
TAGETDRG	PY62E-HOW EASY TO GET OTHER DRUGS AT SCH	10,117	89.63%
TADRUNK	PY63-ANY STUDENTS DRUNK AT SCHOOL	10,117	99.36%
TAHIGH	PY64-ANY STUDENTS HIGH AT SCHOOL	10,117	99.22%
TADRUGIN	P65-DRUNK/HI STDTS INTERFER W/LEARNING	2,315	98.49%
TADEAL	PY66-DRUG DEALERS AT SCHOOL	10,117	99.32%
EDDRUGS	P67-CHILD HAD DRUG ED COURSE THIS YEAR	12,680	91.69%
EDPART	PY68A-DRUG ED: PART OF REGULAR COURSE	8,602	84.33%
EDCOURSE	PY68B-DRUG ED: SPECIAL COURSE	8,602	85.36%
EDDEMO	PY68C-DRUG ED: ASSEMBLIES OR DEMOS	8,602	83.48%
EDCLUBS	PY68D-DRUG ED: IN OTH ACTIVITIES, CLUBS	8,602	84.58%
CCMISSED	P70-DAYS CHILD MISSED LAST 4 WEEKS	12,680	99.38%
CCREPEAT	P71-HAS CHILD REPEATED ANY GRADES	12,680	99.53%
CCSUSPND	P72-CHILD EVER SUSPENDED FROM SCHOOL	10,117	99.54%
CCSUSPYR	P73-SUSPENSION HAPPENED THIS YEAR	1,389	99.28%
CCEXPEL	P74-CHILD EVER EXPELLED FROM SCHOOL	10,117	99.60%
CCTRANS	P75-USUAL TRANSPORT METHOD TO/FROM SCH	12,680	99.68%
CCSCHL	P77-CHILD IN SCHOOL ACTIVITIES	10,117	99.42%
CCNOSCHL	P78-CHILD IN OUT-OF-SCH ACTIVITY	10,117	99.57%
CCSTATUS	P79-HOW CHILD IS DOING IN SCHOOLWORK	12,680	99.35%
CCSTATAB	P80-WHERE IN MIDDLE OF CLASS STANDING	2,842	98.49%
FCMOVED	P81-# TIMES CHILD MOVED IN PAST 5 YRS	12,680	99.44%

Table 17.--Item response rates in the School Safety and Discipline parent interview--Continued

Variable Name	Item number and label	Number eligible	Response rate
FCLIVE	P82-HOME LOCATION INFLUENCED BY SCHOOL	12,680	99.53%
FCSCHOOL	P83A-SATISFIED WITH SCHOOL	12,680	99.59%
FCTEACHR	P83B-SATISFIED WITH TEACHERS	12,680	99.08%
FCSTDS	P83C-SATISFIED WITH ACADEMIC STANDARDS	12,680	99.14%
FCORDER	P83D-SATISFIED WITH DISCIPLINE	12,680	99.27%
FCGRADHS	PY84A-THINK CHILD/SELF WILL GRADUATE HS	12,680	98.67%
FCPOSTHS	PY84B-THINK CHILD/SELF ATTND SCH AFT HS	12,680	94.01%
FCGRADCO	PY84C-THINK CHILD/SELF TO GRADUATE COLL	12,680	89.15%
FCACTIVY	PY85-PRNT & CHLD TALKED ABT SCH EVENTS	12,680	99.67%
FCDRUGS	PY86-PRNT & CHLD TALKED ABOUT DRUGS	12,680	99.58%
FCTHREAT	PY87-PRNT & CHLD TALKED ABT THREAT/DANGR	12,680	99.50%
FCCLASS	PY88A-CHLD WORRIED ABT HARM IN CLASSROOM	12,680	99.60%
FCGROUND	PY88B-CHLD WORRIED ABT HARM AT SCH/GROUN	12,680	99.59%
FCTRAVEL	PY88C-CHLD WORRIED ABT HARM TO/FROM SCH	12,680	99.63%
FCMEETNG	P89A-PARENTS ATTENDED GENERAL SCH MEETIN	12,680	99.68%
FCSPORTS	P89B-PARENTS ATTENDED SCHOOL EVENTS	12,680	99.66%
FCVOLNTR	P89C-PARENTS ACTED AS VOLUNTEERS AT SCH	12,680	99.68%
FCSCHLWK	P90-TCHER CONTACTED PARENT ABT SCHWORK	12,680	99.70%
FCBEHAVE	P91-TCHER CONTACTED PARENT ABT BEHAVIOR	12,680	99.73%
FCSMOKOK	PY92-PARENTS THINK CHILD SMOKING OK	10,117	99.63%
FCSMOKAG	PY93-TIME/AGE CHILD SMOKING IS OK	9,958	99.31%
FCALCOOK	PY94-PARENTS THINK CHILD DRINKING OK	10,117	99.64%
FCALCOAG	PY95-TIME/AGE CHILD DRINKING IS OK	9,757	99.42%
CONEIGH	PY96-HOW SAFE IS NEIGHBORHOOD	12,680	99.48%
COSCHOOL	PY97-HOW SAFE IS SCHOOL VS NEIGHBORHOOD	12,680	99.15%
MOMGRADE	P99-HIGHEST GRADE MOTHER COMPLETED	12,243	99.41%
MOMDIPL	P100-MOTHER COMPLETED HS DIPLOMA	1,777	99.27%
MOMWORK	P101-MOTHER WORKED FOR PAY LAST WEEK	12,243	99.54%
MOMLEAVE	P102-MOM ON LEAVE OR VACATION LAST WEEK	3,648	99.42%
MOMHOURS	P103-HOURS PER WEEK MOTHER WORKS FOR PAY	8,891	98.91%
MOMLOOK	P104-MOM LOOKING FOR WORK PAST 4 WEEKS	3,352	99.37%
MOMPUBL	P105A-MOM CHECKED PUBLIC EMPLOY AGENCY	568	98.59%
MOMPRIV	P105B-MOM CHECKED PRIVATE EMPLOY AGENCY	568	98.59%
MOMEMPL	P105C-MOM CHECKED W/EMPLOYER DIRECTLY	568	98.42%
MOMREL	P105D-MOM CHECKED W/FRIENDS/RELATIVES	568	98.59%
MOMANSAD	P105E-MOTHER PLACED OR ANSWERED ADS	568	98.59%
MOMREAD	P105F-MOM READ WANT ADS	568	98.59%
MOMOTHER	P105G-MOM DID OTHER THING TO FIND WORK	568	98.59%
MOMACTY	P106-MOTHER'S MAIN ACTIVITY LAST WEEK	2,866	99.23%
DADGRADE	P107-HIGHEST GRADE FATHER COMPLETED	9,657	98.99%
DADDIPL	P108-FATHER COMPLETED A HS DIPLOMA	1,248	98.96%
DADWORK	P109-FATHER WORKED FOR PAY LAST WEEK	9,657	99.58%
DADLEAVE	P110-DAD ON LEAVE OR VACATION LAST WEEK	939	99.04%
DADHOURS	P111-HOURS PER WEEK FATHER WORKS FOR PAY	8,902	98.43%
DADLOOK	P112-DAD LOOKING FOR WORK PAST 4 WEEKS	755	98.94%
DADPUBL	P113A-DAD CHECKED PUBLIC EMPLOY AGENCY	328	97.87%
DADPRIV	P113B-DAD CHECKED PRIVATE EMPLOY AGENCY	328	97.87%
DADEMPL	P113C-DAD CHECKED W/EMPLOYER DIRECTLY	328	97.87%
DADREL	P113D-DAD CHECKED W/FRIENDS/RELATIVES	328	97.87%

Table 17.--Item response rates in the School Safety and Discipline parent interview--Continued

Variable Name	Item number and label	Number eligible	Response rate
DADANSAD	P113E-FATHER PLACED OR ANSWERED ADS	328	97.87%
DADREAD	P113F-DAD READ WANT ADS	328	97.87%
DADOTHER	P113G-DAD DID OTHER THING TO FIND WORK	328	97.87%
DADACTY	P114-FATHER'S MAIN ACTIVITY LAST WEEK	468	99.15%
HOWNHOME	P116-OWN, RENT HOME OR SOMETHING ELSE	12,680	99.44%
HBEDRMS	P117-NUMBER OF BEDROOMS IN HOME	12,680	99.21%
HINCMRNG	P123-TOTAL HOUSEHOLD INCOME - RANGE	12,680	95.46%
HINCOME	P123-TOTAL HOUSEHOLD INCOME	12,680	92.94%
STRATUM	FOR USE IN TAYLOR SERIES VARIANCE	12,680	100.00%

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1993.

Table 18.--Item response rates in the School Safety and Discipline youth interview

Variable Name	Item number and label	eligible	Response rate
SEX	SUBJECT CHILD'S SEX	6,504	100.00%
DOBMM	P1-MONTH OF BIRTH	6,504	99.55%
DOBYY	P1-YEAR OF BIRTH	6,504	99.63%
RACE	P2-SUBJECT CHILD'S RACE	6,504	99.58%
HISPANIC	P3-SUBJECT CHILD IS OF HISPANIC ORIGIN	6,504	99.63%
ENROLL	P4-CHILD ATTENDING OR ENROLLED IN SCHOOL	6,504	100.00%
GRADE	P6-GRADE OR YEAR CHILD IS ATTENDING	6,504	100.00%
GRADEEQ	P7-GRADE EQUIVALENT FOR UNGRADED/SPEC ED	10	100.00%
MOMHOME	P8-TYPE OF MOTHER LIVING IN HH	6,504	100.00%
DADHOME	P9-TYPE OF FATHER LIVING IN HH	6,504	99.95%
SCPUBLIC	P10-PUBLIC OR PRIVATE SCHOOL	6,504	99.98%
SCASSIGN	P11-ASSIGNED OR CHOSEN SCHOOL	5,898	99.98%
SCCHURCH	P12-RELIGION-AFFILIATED SCHOOL	606	100.00%
SCREASON	P13-MAIN REASON CHILD ATTENDS THIS SCH	1,259	99.92%
SCNEIGH	P14-SCHOOL LOCATED IN NEIGHBORHOOD	6,504	99.98%
SCLOW	P15-LOWEST GRADE AT CHILD'S SCHOOL	6,504	99.97%
SCHIGH	P16-HIGHEST GRADE AT CHILD'S SCHOOL	6,504	99.97%
SCFIRST	P17-CHILD'S FIRST YEAR IN THE SCHOOL	6,504	99.98%
SCSTUD	P18-# OF STUDENTS AT CHILD'S SCHOOL	6,504	99.94%
SCSTUDGR	P18-# OF STUDENTS IN CHILD'S GRADE	52	100.00%
SCSAMETH	P19-PERCENTAGE STUDENTS OF CHILD'S RACE	6,504	99.97%
SCGENDER	P20-SCHOOL ENROLL BOYS, GIRLS, OR BOTH	6,504	99.97%
SECHALNG	PY21A-CHILD CHALLENGED AT SCHOOL	6,504	99.83%
SEENJOY	PY21B-CHILD ENJOYS SCHOOL	6,504	99.82%
SETEADIS	PY21C-TEACHERS MAINTAIN DISCIPLINE	6,504	99.80%
SERESPCT	PY21D-STDTS/TCHERS RESPECT EACH OTHER	6,504	99.83%
SEPRIDIS	PY21E-PRINCIPAL MAINTAINS DISCIPLINE	6,504	99.49%
SEWORKOK	PY22-FRIENDS THINK OK TO WORK FOR GRADES	6,504	99.74%
SEBEHVOK	PY23-FRIENDS THINK IT'S OK TO BEHAVE	6,504	99.85%
SEBEHPUN	PY24-WHY DO FRIENDS BEHAVE	5,400	98.63%
SSSTEAL	PY26-THINGS STOLEN FROM LOCKERS OR DESKS	6,504	99.72%
SSSTEWOR	PY27-WORRIED ABOUT THEFT	3,972	99.72%
SSSTEYOU	PY28-THINGS STOLEN FROM CHILD	3,972	99.72%
SSFORCE	PY29-THINGS TAKEN BY FORCE OR THREAT	6,504	99.58%
SSFORSEE	PY30-CHILD SAW THINGS TAKEN BY FORCE	775	99.74%
SSFORWOR	PY31-CHILD WORRIED ABOUT FORCE	775	99.74%
SSFORYOU	PY32-CHILD HAD THINGS TAKEN BY FORCE	775	99.74%
SSFORWHR	PY33-WHERE FORCEFUL EVENT TOOK PLACE	88	97.73%
SSBULLY	PY34-STUDENTS BULLIED	6,504	99.49%
SSBULSEE	PY35-CHILD SAW BULLYING	3,681	99.51%
SSBULWOR	PY36-CHILD WORRIED ABOUT BULLYING	3,681	99.57%
SSBULYOU	PY37-CHILD WAS BULLIED	3,681	99.59%
SSBULWHR	PY38-WHERE CHILD WAS BULLIED	533	98.50%
SSATTACK	PY39-PHYSICAL ATTACKS TOOK PLACE	6,504	99.80%
SSATTSEE	PY40-CHILD SAW A PHYSICAL ATTACK	2,818	99.65%
SSATTWOR	PY41-CHILD WORRIED ABOUT ATTACKS	2,818	99.72%
SSATTYOU	PY42-CHILD WAS PHYSICALLY ATTACKED	2,818	99.72%
SSATTWHR	PY43-WHERE PHYSICAL ATTACK HAPPENED	222	97.75%
SSROUTE	Y44A-CHILD TOOK SPECIAL ROUTE TO SCHOOL	6,504	99.97%
SSPLACES	Y44B-CHILD AVOIDED PLACES IN SCHOOL	6,504	100.00%
SSPARKNG	Y44C-CHILD AVOIDED PLACES ON SCH GROUNDS	6,504	99.98%
SSDANCES	Y44D-CHILD AVOIDED SCHOOL EVENTS	6,504	99.94%

Table 18.--Item response rates in the School Safety and Discipline youth interview--Continued

Variable Name	Item number and label	eligible	Response rate
SSGROUP	Y44E-CHILD STAYED IN GROUP AT SCHOOL	6,504	99.98%
SSSKIP	Y44F-CHILD SKIPPED SCHOOL	6,504	100.00%
SSRACIAL	PY46-ANY INCIDENTS RACIALLY MOTIVATED	5,416	96.90%
SSGANGS	PY47-ANY STUDENTS IN FIGHTING GANGS	6,504	93.85%
SSGANNUM	PY48-MORE THAN 1 GANG AT CHILD'S SCHOOL	2,357	87.95%
SSGANYOU	PY49-CHILD BELONGS TO A GANG	2,357	94.06%
SSGANREL	PY50-ANY INCIDENTS FROM GANG ACTIVITY	2,176	89.43%
SSWEAYOU	Y51-CHILD BROUGHT WEAPONS TO SCHOOL	6,504	99.98%
SSGUN	Y52A-CHILD BROUGHT GUN TO SCHOOL	211	100.00%
SSKNIFE	Y52B-CHILD BROUGHT KNIFE TO SCHOOL	211	100.00%
SSBRASS	Y52C-CHILD BROUGHT BRASS KNUCKLES TO SCH	211	100.00%
SSRAZOR	Y52D-CHILD BROUGHT RAZOR BLADE TO SCHOOL	211	100.00%
SSJEWLRY	Y52E-CHILD BROUGHT SPIKED JEWELRY TO SCH	211	100.00%
SSMACE	Y52F-CHILD BROUGHT MACE TO SCHOOL	211	100.00%
SSCHUCKS	Y52G-CHILD BROUGHT NUNCHUCKS TO SCHOOL	211	100.00%
SSSTICK	Y52H-CHILD BROUGHT STICK,CLUB,BAT TO SCH	211	100.00%
SSOTHER	Y52I-CHILD BROUGHT OTHER WEAPON	211	99.53%
SSWEAOTH	PY53-OTHER STUDENTS BRING WEAPONS	6,504	99.65%
SSGUARDS	PY55A-SCHOOL HAS SECURITY GUARDS	6,504	99.25%
SSMETAL	PY55B-SCHOOL HAS METAL DETECTORS	6,504	97.72%
SSLOCKS	PY55C-SCHOOL HAS LOCKED DOORS	6,504	97.83%
SSVISITR	PY55D-SCHOOL REQUIRES VISITOR SIGN IN	6,504	94.56%
SSRESTRM	PY55E-LIMIT ON RESTROOM ACCESS	6,504	99.25%
SSHALSUP	PY55F-TEACHER SUPERVISION IN HALLWAYS	6,504	99.28%
SSLOCKER	PY55G-SCHOOL HAS REGULAR LOCKER CHECKS	6,504	97.19%
SSHALPAS	PY55H-HALL PASS REQUIRED TO LEAVE CLASS	6,504	99.88%
SDKNOWS	Y60A-EVERYONE KNOWS THE SCHOOL RULES	6,504	99.97%
SDFAIR	Y60B-SCHOOL RULES ARE FAIR	6,504	99.89%
SDPUNISH	Y60C-PUNISHMENT IS CONSISTENT	6,504	99.77%
SDENFORC	Y60D-SCHOOL RULES ARE STRICTLY ENFORCED	6,504	99.54%
SDKNOPUN	Y60E-IF RULE IS BROKEN, PUNISHMENT KNOWN	6,504	99.78%
SDPADDLE	Y60F-STUDENTS SPANKED FOR RULE BREAKING	6,504	99.12%
TASMOKE	Y61A-FRIENDS THINK SMOKING IS OK	6,504	99.25%
TADRINK	Y61B-FRIENDS THINK DRINKING IS OK	6,504	99.23%
TAMARIJ	Y61C-FRIENDS THINK SMOKING MARIJUANA OK	6,504	98.65%
TADRUGS	Y61D-FRIENDS THINK TAKING DRUGS IS OK	6,504	98.46%
TAGETCIG	PY62A-HOW EASY TO GET CIGARETTES AT SCH	6,504	99.14%
TAGETBER	PY62B-HOW EASY TO GET BEER/WINE AT SCH	6,504	98.94%
TAGETLIQ	PY62C-HOW EASY TO GET LIQUOR AT SCH	6,504	98.91%
TAGETMAR	PY62D-HOW EASY TO GET MARIJUANA AT SCH	6,504	98.19%
TAGETDRG	PY62E-HOW EASY TO GET OTHER DRUGS AT SCH	6,504	97.79%
TADRUNK	PY63-ANY STUDENTS DRUNK AT SCHOOL	6,504	99.95%
TAHIGH	PY64-ANY STUDENTS HIGH AT SCHOOL	6,504	99.54%
TADEAL	PY66-DRUG DEALERS AT SCHOOL	6,504	99.97%
EDPART	PY68A-DRUG ED: PART OF REGULAR COURSE	6,504	99.88%
EDCOURSE	PY68B-DRUG ED: SPECIAL COURSE	6,504	99.63%
EDDEMO	PY68C-DRUG ED: ASSEMBLIES OR DEMOS	6,504	99.66%
EDCLUBS	PY68D-DRUG ED: IN OTH ACTIVITIES, CLUBS	6,504	98.75%
EDMESAGE	Y69-MAIN MESSAGE ABOUT DRINKING	6,504	99.63%
FCGRADHS	PY84A-THINK CHILD/SELF WILL GRADUATE HS	6,504	99.69%
FCPOSTHS	PY84B-THINK CHILD/SELF ATTND SCH AFT HS	6,504	97.54%
FCGRADCO	PY84C-THINK CHILD/SELF TO GRADUATE COLL	6,504	95.79%

Table 18.--Item response rates in the School Safety and Discipline youth interview--Continued

Variable Name	Item number and label	eligible	Response rate
FCACTIVY	PY85-PRNT & CHLD TALKED ABT SCH EVENTS	6,427	99.77%
FCDRUGS	PY86-PRNT & CHLD TALKED ABOUT DRUGS	6,427	99.84%
FCTHREAT	PY87-PRNT & CHLD TALKED ABT THREAT/DANGR	6,427	99.75%
FCCLASS	PY88A-CHLD WORRIED ABT HARM IN CLASSROOM	6,427	99.86%
FCGROUND	PY88B-CHLD WORRIED ABT HARM AT SCH/GROUN	6,427	99.88%
FCTRAVEL	PY88C-CHLD WORRIED ABT HARM TO/FROM SCH	6,427	99.88%
FCSMOKOK	PY92-PARENTS THINK CHILD SMOKING OK	6,427	99.42%
FCSMOKAG	PY93-TIME/AGE CHILD SMOKING IS OK	6,195	97.11%
FCALCOOK	PY94-PARENTS THINK CHILD DRINKING OK	6,427	99.78%
FCALCOAG	PY95-TIME/AGE CHILD DRINKING IS OK	6,106	97.40%
CONEIGH	PY96-HOW SAFE IS NEIGHBORHOOD	6,504	99.60%
COSCHOOL	PY97-HOW SAFE IS SCHOOL VS NEIGHBORHOOD	6,504	99.75%
PRIVATE	Y98-CHILD WAS INTERVIEWED PRIVATELY	6,427	99.83%
MOMGRADE	P99-HIGHEST GRADE MOTHER COMPLETED	6,211	99.71%
MOMDIPL	P100-MOTHER COMPLETED HS DIPLOMA	910	99.56%
MOMWORK	P101-MOTHER WORKED FOR PAY LAST WEEK	6,211	99.84%
MOMLEAVE	P102-MOM ON LEAVE OR VACATION LAST WEEK	1,770	99.94%
MOMHOURS	P103-HOURS PER WEEK MOTHER WORKS FOR PAY	4,597	99.41%
MOMLOOK	P104-MOM LOOKING FOR WORK PAST 4 WEEKS	1,614	99.94%
MOMPUBL	P105A-MOM CHECKED PUBLIC EMPLOY AGENCY	284	99.30%
MOMPRIV	P105B-MOM CHECKED PRIVATE EMPLOY AGENCY	284	99.30%
MOMEMPL	P105C-MOM CHECKED W/EMPLOYER DIRECTLY	284	98.94%
MOMREL	P105D-MOM CHECKED W/FRIENDS/RELATIVES	284	99.30%
MOMANSAD	P105E-MOTHER PLACED OR ANSWERED ADS	284	99.30%
MOMREAD	P105F-MOM READ WANT ADS	284	99.30%
MOMOTHER	P105G-MOM DID OTHER THING TO FIND WORK	284	99.30%
MOMACTY	P106-MOTHER'S MAIN ACTIVITY LAST WEEK	1,366	99.93%
DADGRADE	P107-HIGHEST GRADE FATHER COMPLETED	4,845	99.20%
DADDIPL	P108-FATHER COMPLETED A HS DIPLOMA	647	99.23%
DADWORK	P109-FATHER WORKED FOR PAY LAST WEEK	4,845	99.77%
DADLEAVE	P110-DAD ON LEAVE OR VACATION LAST WEEK	494	99.39%
DADHOURS	P111-HOURS PER WEEK FATHER WORKS FOR PAY	4,452	98.74%
DADLOOK	P112-DAD LOOKING FOR WORK PAST 4 WEEKS	393	99.49%
DADPUBL	P113A-DAD CHECKED PUBLIC EMPLOY AGENCY	162	98.77%
DADPRIV	P113B-DAD CHECKED PRIVATE EMPLOY AGENCY	162	98.77%
DADEMPL	P113C-DAD CHECKED W/EMPLOYER DIRECTLY	162	98.77%
DADREL	P113D-DAD CHECKED W/FRIENDS/RELATIVES	162	98.77%
DADANSAD	P113E-FATHER PLACED OR ANSWERED ADS	162	98.77%
DADREAD	P113F-DAD READ WANT ADS	162	98.77%
DADOTHER	P113G-DAD DID OTHER THING TO FIND WORK	162	98.77%
DADACTY	P114-FATHER'S MAIN ACTIVITY LAST WEEK	250	99.60%
HOWNHOME	P116-OWN, RENT HOME OR SOMETHING ELSE	6,504	99.57%
HBEDRMS	P117-NUMBER OF BEDROOMS IN HOME	6,504	99.52%
HINCMRNG	P123-TOTAL HOUSEHOLD INCOME - RANGE	6,504	96.43%
HINCOME	P123-TOTAL HOUSEHOLD INCOME	6,504	93.97%
INTPRIV	INTPR-CHILD ANSWERED PRIVATELY	6,427	99.64%
STRATUM	FOR USE IN TAYLOR SERIES VARIANCE	6,504	100.00%

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1993

Item Response in the School Readiness Interview

As in the SS&D interviews, most items in the School Readiness interviews had very high response rates. Of the 295 variables in the interview, 74 percent had response rates of 98 percent or more, and 92 percent had response rates of 95 percent or more. Table 19 shows the response rates for all the items in the SR questionnaire. The number of cases for which an item was asked and the percentage of cases for which a valid response was obtained are shown. The label for each item includes the question number.

Some of the items with lower response rates may have been difficult for some respondents to recall, such as the child's age for specific events (e.g., age when child started kindergarten/months, age when child began reading/months, and age in years and months when nonbirth mother first lived with child) or the amount of time that an event occurred (e.g., years and months child lived apart from his/her mother; years and months the family received food stamp). Some others dealt with repeating grades or disability. Many of the low response items were asked of few respondents, so that even a small number of missing values had a significant effect on the item response rate. Of the 23 items with less than 95 percent response, 18 were asked of about 15 percent of the total number of respondents or less (i.e., 1,513 cases or less), and 13 were asked of about 5 percent of the respondents or less (i.e., 502 cases or less); 8 of them were asked of less than 100 parents.

When an interview was broken off after a major portion of the questions were answered and it was not possible to complete the remaining questions, the cases was coded a "partial complete." In the SR interview, this occurred if the respondent had completed all sections prior to items about the child's parents and household. There were 148 partial completed in the SR component. Because these cases represent a very small percentage of the total number of interviews, item response rates do not decline appreciably at the end of the interview (see the items in table 19 beginning with MOMMARRY through the end of the interview). While a number of the items pertaining to mothers and fathers, especially those related to methods of looking for work, have response rates below 97 percent, only 4 of them have response rates below 95 percent.

Table 19.--Item response rates in the School Readiness interview

Variable	Item Number and Label	Number eligibl	Response rate
SEX	SUBJECT CHILD'S SEX		
DOBMM	R1-MONTH OF BIRTH	10,888	99.43%
DOBYY	R1-YEAR OF BIRTH	10,888	99.55%
RACE	R2-SUBJECT CHILD'S RACE	10,888	99.61%
HISPANIC	R3-SUBJECT CHILD IS OF HISPANIC ORIGIN	10,888	99.68%
ENROLL	R4-CHILD ATTENDING OR ENROLLED IN SCHOOL	10,888	100.00%
HOMESCHL	R5-HAVING HOME SCHOOLING OR TUTORING	268	96.27%
GRADE	R6-GRADE OR YEAR CHILD IS ATTENDING	10,888	100.00%
GRADEEQ	R7-GRADE EQUIVALENT FOR UNGRADED/SPEC ED	116	97.41%
ATNDKIND	R8-CHILD ATTENDED K BEFORE T/P/1 GRADE	4,290	99.91%
DPCOLOR	R14-CHILD CAN IDENTIFY COLOR	4,423	99.80%
DPLETTER	R15-CHILD RECOGNIZES LETTERS	4,423	99.73%
DPCOUNT	R16-HOW HIGH CHILD CAN COUNT	4,423	99.84%
DPNAME	R17-CHILD CAN WRITE FIRST NAME	4,423	99.68%
DPBUTTON	R18-CHILD CAN BUTTON CLOTHES	4,423	99.34%
DPPENCIL	R19-CHILD HOLDS PENCIL PROPERLY	4,423	99.23%
DPWRITE	R20-CHILD WRITES AND DRAWS	4,423	99.48%
DPFALL	R21-CHILD TRIPS/STUMBLES/FALLS EASILY	4,423	99.73%
DPSITTER	R22-CHILD CAN BE LEFT WITH SITTER EASILY	4,423	96.90%
DPTEMPER	R23-CHILD OFTEN HAS TANTRUMS	4,423	99.71%
DPAFRAID	R24-CHILD AFRAID TO SPEAK TO STRANGERS	4,424	100.00%
DPFIDGET	R25-CHILD FIDGETS A LOT	4,423	99.59%
DPATTN	R26-CHILD HAS SHORT ATTENTION SPAN	4,423	99.23%
DPSPEAK	R27-CHILD IS UNDERSTANDABLE TO STRANGERS	4,423	99.32%
DPSPELAT	R28-CHILD BEGAN SPEAKING LATE	4,423	98.91%
DPSTUTER	R29-CHILD STUTTERS OR STAMMERS	4,423	99.68%
DPTV	R30-CHILD TURNS TV TO HIGH VOLUME	4,423	99.75%
DPBEND	R31-CHILD BENDS TO LOOK AT PICTURE	4,423	99.28%
HEADSTRT	R32-CHILD ENROLLED IN HEAD START	4,423	99.82%
HEADEVR	R33-CHILD EVER ATTENDED HEAD START	10,497	99.52%
HEADAGMO	R34-AGE CHILD STARTED HEAD START/MONTHS	1,530	94.38%
HEADAGYR	R34-AGE CHILD STARTED HEAD START/YEARS	1,530	97.84%
HEADATND	R35-HOW LONG CHILD ATTENDED HEAD START	1,530	99.22%
PREKIND	R36-ATTEND NURSERY/PRESCH/DAYCARE PREK	4,423	99.93%
PREKEVR	R37-EVER ATTEND NURSRY/PREK/PRESCH/DAYCR	8,770	99.78%
PREKAGMO	R38-AGE CHILD BEGAN PRESCH ETC/MONTHS	6,680	97.35%
PREKAGYR	R38-AGE CHILD BEGAN PRESCH ETC/YEARS	6,680	99.22%
PREKATND	R39-TIME CHILD ATTENDED ANY PRESCH PRGM	6,680	98.80%
PREKANY	R40-ANY PRESCH PROGRAM HAVE ED PRGRM	7,632	98.31%
PREKNUM	R41-NUMBER OF PROGRAMS CHILD ATTENDS	2,400	99.38%
PREKPUBL	R43-PUBLIC OR PRIVATE PROGRAM	2,400	98.54%
PREKEDUC	R44-PROGRAM HAS ED PROGRAM	2,400	97.75%
PREKDAYS	R45-# DAYS/WK CHILD IN PROGRAM	2,400	99.33%
PREKHRS	R46-# HOURS/WK CHILD IN PROGRAM	2,400	96.75%
PREKFULL	R47-FULL- OR PART-DAY PROGRAM	2,400	96.71%
PREKID	R48-NUMBER OF KIDS AT PROGRAM	2,400	97.58%
PREKADLT	R49-NUMBER OF ADULTS AT PROGRAM	2,400	98.38%
SACOMPLA	R51A-CHILD COMPLAINED ABOUT SCHOOL	6,403	99.72%
SALEAVE	R51B-CHILD RELUCTANT TO GO TO SCH	6,403	99.80%
SASICK	R51C-CHILD PRETENDED TO BE SICK	6,403	99.83%

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Table 19.--Item response rates in the School Readiness interview--Continued

Variable	Item Number and Label	Number eligibl	Response rate
SAGOOD	R51D-CHLD SAID GOOD THINGS ABT SCH	6,403	99.42%
SATEACHR	R51E-CHILD SAID LIKED TEACHER	6,403	99.45%
SASCHOOL	R51F-CHILD LOOKED FORWARD TO SCHOOL	6,403	99.48%
TEWELL	R52A-TCHER SAYS CHILD DOING WELL IN SCH	6,403	99.84%
TEABIL	R52B-TCHER SAYS CHLD NOT UP TO CAPABILIT	6,403	99.75%
TEATTENT	R52C-TCHER SAYS CHLD DOESNT CONCENTRATE	6,403	99.69%
TEDISRUP	R52D-TCHER SAYS CHILD ACTS UP IN SCHOOL	6,403	99.86%
TESAD	R52E-TCHER SAYS CHILD OFTEN SAD/UNHAPPY	6,403	99.81%
TEFIDGET	R52F-TEACHER SAYS CHILD RESTLESS/FIDGETS	6,403	99.73%
TESHARE	R52G-TCHR SAYS CHILD HAS TROUBLE SHARING	6,403	99.83%
TEGROUP	R52H-TEACHER SAYS CHILD GETS ALONG WELL	6,403	99.59%
TEENTHUS	R52I-TEACHER SAYS CHILD ENTHUSIASTIC	6,403	99.41%
TENONEW	R52J-TEACHER SAYS CHILD LACKS CONFIDENCE	6,403	99.61%
TECLEAR	R52K-TCHER SAYS CHILD HARD TO UNDERSTAND	6,403	99.77%
TESLEEPY	R52L-TEACHER SAYS CHILD SLEEPY IN CLASS	6,403	99.84%
TEEXPRES	R52M-TCHER SAYS CHILD SPEAKS OUT IN CLAS	6,403	97.94%
TETALK	R53-TIMES PARENT/TCHER COMMUNICATED	6,403	99.80%
KPSTART	R55-WHEN EXPECT CHILD START KINDERGARTEN	4,423	97.35%
KPENROLL	R56-K ENROLLMENT/BIRTHDATE OR WAIT	10,696	99.00%
KPCONCRN	R58-CONCERNED IF CHILD READY FOR K	2,027	98.17%
KPAGEYR	R59-AGE CHILD STARTED K/YEARS	6,340	98.77%
KPAGEMO	R59-AGE CHILD STARTED K/MONTHS	6,340	97.57%
KPPUBL	R60-KINDERGARTEN PUBLIC OR PRIVATE	6,340	99.57%
KPCHOICE	R61-SCHOOL IS REGULARLY ASSIGNED SCHOOL	5,289	99.60%
KPCHURCH	R62-RELIGION-AFFILIATED KINDERGARTEN	1,051	99.43%
KPFULDAY	R63-FULL OR PART DAY K	6,340	99.67%
KPHRS	R64-HOURS CHILD IN K EACH WEEK	6,340	98.71%
KPKYEAR	R65-1ST OR 2ND YEAR OF K	2,126	99.53%
KPSYEAR	R66-# OF YEARS CHILD ATTENDED K	4,214	99.53%
KPPLAN	R67-PLAN WAS FOR CHILD TO ATTEND K >1YR	386	98.45%
KPWHO	R68-WHO 1ST SUGGESTED CHILD REPEAT K	386	95.08%
KPAGREE	R69-R AGREES CHILD SHOULD REPEAT K	228	93.42%
KPGOOD	R70-R NOW FEELS REPEATING K GOOD IDEA	386	98.70%
PPUBL	R71-CURRENT SCHOOL PUBLIC OR PRIVATE	4,277	99.95%
PCHOICE	R72-ASSIGNED OR CHOSEN SCHOOL	3,750	99.87%
PCHURCH	R73-RELIGION-AFFILIATED SCHOOL	527	99.81%
PSAME	R74-K AND 1ST GRADE WERE AT SAME SCHOOL	4,214	99.38%
PNEWKIDS	R75-CHILDREN IN CLASS NEW TO CHILD	1,082	98.71%
PCHANGE	R76-# TIMES CHILD CHANGED SCHOOL	4,277	99.53%
PWORK	R77-CHILD'S CLASS STANDING	4,277	98.46%
PWORKMID	R78-CHILD'S STANDING ABOVE MID-CLASS	934	95.50%
PREADING	R79A-CHILD RECEIVED HELP WITH READING	4,277	99.37%
PMATH	R79B-CHILD RECEIVED SPECIAL HELP W/MATH	4,277	99.46%
PADJUST	R79C-CHILD RECEIVED HELP TO ADJUST	4,277	99.56%
PSPEECH	R79D-CHILD RECEIVED HELP WITH SPEECH	4,277	99.63%
PENGLISH	R79E-CHILD RECEIVED HELP WITH ESL	4,277	99.63%
PMISBHAV	R80-CLASS BEHAVIOR INTERFERED W/LEARNING	6,403	98.53%
RREPT	R81-CHILD HAS REPEATED ANY GRADES	4,277	99.93%
RREPT1	R82-CHILD REPEATED FIRST GRADE	188	98.94%

Table 19.--Item response rates in the School Readiness interview--Continued

Variable	Item Number and Label	Number eligibl	Response rate
RREPT2	R82-CHILD REPEATED SECOND GRADE	188	98.94%
RSUGGES0	R83-WHO SUGGESTED CHILD REPEAT GRADE 1	164	96.95%
RSUGGES1	R83-WHO SUGGESTED CHILD REPEAT GRADE 2	25	96.00%
RAGREE0	R84-PARENT AGREED CHILD REPEAT GRADE 1	117	96.58%
RAGREE1	R84-PARENT AGREED CHILD REPEAT GRADE 2	19	94.74%
RIDEA0	R85-GOOD IDEA TO REPEAT GRADE 1	164	98.17%
RIDEA1	R85-GOOD IDEA TO REPEAT GRADE 2	25	96.00%
HASTORY	R86-CHILD CAN READ STORY BOOKS ON OWN	10,888	99.72%
HAWORDS	R87-CHILD CAN READ OR PRETENDS TO READ	4,769	99.50%
HAREADYR	R88-AGE WHEN BEGAN READING/YEARS	4,561	97.90%
HAREADMO	R88-AGE WHEN BEGAN READING/MONTHS	4,561	94.65%
HAPRETND	R89-CHILD PRETENDS TO READ PICTURE BOOKS	6,119	99.72%
HACONECT	R90-PRETEND READING SOUNDS LIKE STORY	6,153	98.60%
HABOOKS	R91-NUMBER OF BOOKS CHILD HAS	10,888	99.73%
TVBFOR8H	R92A-HOURS OF TV BEFORE 8AM	10,888	99.10%
TVBFOR8M	R92A-MINUTES OF TV BEFORE 8AM	10,838	99.08%
TV8TO3H	R92B-HOURS OF TV FROM 8AM TO 3PM	10,838	98.73%
TV8TO3M	R92B-MINUTES OF TV FROM 8AM TO 3PM	10,838	98.74%
TV3DINH	R92C-HOURS OF TV FROM 3PM TO DINNER	10,838	98.81%
TV3DINM	R92C-MINUTES OF TV FROM 3PM TO DINNER	10,838	98.85%
TVAFDINH	R92D-HOURS OF TV AFTER DINNER	10,838	98.98%
TVAFDINM	R92D-MINUTES OF TV AFTER DINNER	10,838	98.98%
TVSATH	R93A-HOURS OF TV SATURDAY	10,838	98.73%
TVSATM	R93A-MINUTES OF TV SATURDAY	10,838	98.73%
TVSUNH	R93B-HOURS OF TV SUNDAY	10,838	98.81%
TVSUNM	R93B-MINUTES OF TV SUNDAY	10,838	98.81%
TVSESAME	R94A-WATCHES SESAME STREET ONCE/WK, MORE	6,549	98.60%
TVROGERS	R94B-WATCHES MR ROGERS ONCE/WK OR MORE	6,549	97.48%
TVBARNEY	R94C-WATCHES BARNEY ONCE/WK OR MORE	6,549	97.50%
TVRAINBO	R94D-WATCHES READ RAINBOW ONCE/WK, MORE	6,549	95.72%
TVSESFRQ	R95-WATCHED SESAME STREET BEFORE SCHOOL	6,403	98.05%
READTIME	R96A-TIME FAMILY READ TO CHILD LAST WK	5,397	99.26%
READTO	R96-FAMILY MEMBER READ TO CHILD LAST WK	5,491	99.34%
READTON	R97-TIMES/WK FAMILY READ TO CHILD	4,926	99.21%
READDAY	R98-READING EVERY DAY IN LAST WEEK	3,808	99.19%
WKSTORY	R99A-TOLD CHILD A STORY IN LAST WEEK	6,584	99.12%
WKSTORYN	R99A-# TIMES TOLD CHILD A STORY IN LAST WEEK	4,929	98.99%
WKWORDS	R99B-TAUGHT CHILD LETTERS, WORDS, #S	6,584	99.15%
WKWORDSN	R99B-# TIMES TAUGHT LETTERS, WORDS, #S	5,773	99.03%
WKMUSIC	R99C-TAUGHT CHILD SONGS/MUSIC PAST WEEK	6,584	99.15%
WKMUSICN	R99C-# TIMES TAUGHT CHILD SONGS/MUSIC	4,382	99.18%
WKCRAFT	R99D-DID ARTS/CRAFTS WITH CHILD LAST WK	6,584	99.09%
WKCRAFTN	R99D-# TIMES DID ARTS/CRAFTS W/CHILD	4,501	99.20%
WKPLAYI	R99E-PLAYED TOYS/GAMES INDOORS LST WEEK	6,584	99.21%
WKPLAYIN	R99E-# TIMES PLAYED TOYS/GAMES INDOORS	6,261	99.25%
WKPLAYO	R99F-PLAYED W/CHILD OUTSIDE PAST WEEK	6,584	99.29%
WKPLAYON	R99F-# TIMES PLAYED OUTSIDE W/CHILD	4,192	99.17%
WKERAND	R99G-TOOK CHILD ON ERRANDS LAST WEEK	6,584	99.30%
WKERANDN	R99G-# TIMES TOOK CHILD ON ERRANDS	6,192	99.31%

Table 19.--Item response rates in the School Readiness interview--Continued

Variable	Item Number and Label	Number eligibl	Response rate
WKCHORE	R99H-INVOLVED CHILD IN CHORES LAST WK	6,584	99.29%
WKCHOREN	R99H-# TIMES INVOLVED CHILD IN HH CHORES	6,054	99.31%
MOLIBRAY	R100A-VISITED LIBRARY IN LAST MONTH	6,584	99.36%
MOCONCRT	R100B WENT TO PLAY/CONCERT/SHOW PAST MO	6,584	99.29%
MOMUSEUM	R100C-VISITED GALLERY/MUSEUM PAST MONTH	6,584	99.35%
MOZOO	R100D-TOOK CHILD TO ZOO OR AQUARIUM	6,584	99.35%
MOETHNIC	R100E-TALKED W/CHLD ABOUT ETHNIC HERITAG	6,584	99.27%
MOCHURCH	R100F-ATTENDED EVENT BY RELIGIOUS GROUP	6,584	99.24%
HN5LBS	R101-CHILD BIRTH WEIGHT OVER 5 1/2 LBS	10,888	98.56%
HN3LBS	R102-CHILD BIRTH WEIGHT OVER 3 LBS	716	98.04%
HNCARE	R103-CHILD HAD INTENSIVE CARE WHEN BORN	10,888	98.82%
HNDELAY	R104-CHILD HAD DEVELOPMENTAL DELAY	10,888	99.15%
HNLEARN	R105A-CHILD EVER HAD LEARNING DISABILITY	10,888	98.89%
HNRETARD	R105B-CHILD EVER HAD MENTAL RETARDATION	10,888	99.14%
HNSPEECH	R105C-CHILD EVER HAD SPEECH IMPAIRMENT	10,888	99.16%
HNBEHAVE	R105D-CHLD HAD SERIOUS EMOTIONAL DISTURB	10,888	99.09%
HNDEAF	R105E-CHILD EVER HAD DEAFNESS	10,888	99.18%
HNHEAR	R105F-CHLD HAD OTHER HEARING IMPAIRMENT	10,888	99.16%
HNBLIND	R105G-CHILD EVER HAD BLINDNESS	10,888	99.26%
HNVISUAL	R105H-CHILD HAD OTHER VISUAL IMPAIRMENT	10,888	99.17%
HNORTHO	R105I-CHILD HAD ORTHOPEDIC IMPAIRMENT	10,888	99.20%
HNOTHER	R105J-CHILD HAD OTHER HEALTH IMPAIRMENT	10,888	99.22%
HHNOW0	R105AA-LEARNING DISABILITY NOW	404	96.04%
HHNOW1	R105AB-MENTALLY RETARDED NOW	59	94.92%
HHNOW2	R105AC-SPEECH IMPAIRMENT	842	99.05%
HHNOW3	R105AD-SERIOUS EMOTIONAL DISTURBANCE NOW	227	97.36%
HHNOW4	R105AE-DEAF NOW	87	94.25%
HHNOW5	R105AF-OTHER HEARING IMPAIRMENT NOW	391	96.68%
HHNOW6	R105AG-BLIND NOW	22	95.45%
HHNOW7	R105AH-VISUAL IMPAIRMENT NOW	354	98.87%
HHNOW8	R105AI-ORTHOPEDIC IMPAIRMENT NOW	213	98.12%
HHNOW9	R105AJ-OTHER HEALTH IMPAIRMENT NOW	450	98.67%
HNPUBLO	R105BA-DISTRICT SERVICES FOR LEARN DISAB	315	96.19%
HNPUBL1	R105BB-DISTRICT SERV FOR MENT RETARD	50	92.00%
HNPUBL2	R105BC-DISTRICT SERV FOR SPEECH IMPAIR	558	98.39%
HNPUBL3	R105BD-DISTRICT SERV FOR EMOTION DIST	90	96.67%
HNPUBL4	R105BE-DISTRICT SERVICES FOR DEAFNESS	17	82.35%
HNPUBL5	R105BF-DISTRICT SERV FOR HEARING IMPAIR	132	99.24%
HNPUBL6	R105BG-DISTRICT SERVICES FOR BLINDNESS	17	94.12%
HNPUBL7	R105BH-DISTRICT SERV FOR VISUAL IMPAIR	297	98.65%
HNPUBL8	R105BI-DISTRICT SERV FOR ORTHOPED IMPAIR	106	99.06%
HNPUBL9	R105BJ-DISTRICT SERV FOR HEALTH IMPAIR	275	98.18%
HNSERV0	R105CA-OTHER SERVICES FOR LEARN DISAB	315	96.51%
HNSERV1	R105CB-OTHER SERVICES FOR MENT RETARD	50	94.00%
HNSERV2	R105CC-OTHER SERVICES FOR SPEECH IMPAIR	558	98.75%
HNSERV3	R105CD-OTHER SERVICES FOR EMOTION DIST	90	97.78%
HNSERV4	R105CE-OTHER SERVICES FOR DEAFNESS	17	100.00%
HNSERV5	R105CF-OTHER SERVICES FOR HEARING IMPAIR	132	99.24%
HNSERV6	R105CG-OTHER SERVICES FOR BLINDNESS	17	94.12%

Table 19.--Item response rates in the School Readiness interview--Continued

Variable	Item Number and Label	Number eligibl	Response rate
HNSERV7	R105CH-OTHER SERVICES FOR VISUAL IMPAIR	297	98.65%
HNSERV8	R105CI-OTHER SERV FOR ORTHOPDEIC IMPAIR	106	98.11%
HNSERV9	R105CJ-OTHER SERV FOR HEALTH IMPAIR	275	98.55%
HNHEALTH	R106-WHAT IS CHILDS GENERAL HEALTH	10,888	99.23%
HNCLINIC	R107-USUAL PLACE CHILD GOES WHEN SICK	4,423	98.96%
HNEMERRM	R108-USUAL PLACE IS EMERGENCY ROOM	4,236	98.94%
HNDOCTOR	R109-USUAL PLACE CHILD GETS CHECKUPS	4,423	98.91%
HNDOCWHN	R110-WHEN CHILD LAST SAW DR, ROUTINE	10,888	99.18%
HNDNTIST	R111-CHILD EVER BEEN TO DENTIST	4,423	98.89%
HNDNTWHN	R112-HOW LONG SINCE CHILD SAW DENTIST	2,583	98.88%
HNBREAK	R113-# DAYS LST WK CHLD ATE BREAKFAST	10,888	99.03%
HNMEAL	R114-DYS LST WK ADULT MADE CHLD HOT MEAL	10,888	99.16%
HNDINNER	R115-# DAYS LAST WK FAMILY ATE TOGETHER	4,423	98.78%
HNNOFOOD	R116-NOT ENOUGH FOOD FOR CHILD IN LST MO	4,423	98.96%
HNWIC	R117-GOT MONEY FROM WIC SINCE CHILD BORN	4,423	98.82%
HNFREE	R118-FREE MEAL AT SCHOOL/CENTER	8,813	98.72%
PKLIVMOM	R119-CHILD EVER LIVED APART FROM MOTHER	6,403	98.91%
PKLIVYR	R120-YRS CHILD LIVED APART FROM MOTHER	502	94.82%
PKLIVMO	R120-MONTHS CHILD LIVED APART FROM MOM	502	93.43%
PKLIVDAD	R121-CHILD LIVED WITH FATHER	502	96.22%
PKLIVGRD	R121-CHILD LIVED WITH GRANDPARENTS	502	96.22%
PKLIVANT	R121-CHILD LIVED WITH AUNT OR UNCLE	502	96.22%
PKLIVREL	R121-CHILD LIVED WITH OTHER RELATIVE	502	96.22%
PKLIVFOS	R121-CHILD LIVED IN FOSTER CARE	502	96.22%
PKLIVOTH	R121-CHILD LIVED WITH SOMEONE NOT LISTED	502	96.22%
PKMOMONL	R122-CHILD LIVED W/MOM AS SINGLE PARENT	5,934	98.48%
PKWRKMOM	R123-MOM HAS WORKED SINCE CHILD BORN	5,934	98.45%
PKWRKYR	R124-YEARS MOM WORKED OUTSIDE THE HOME	4,231	98.11%
PKWRKMO	R124-MONTHS MOM WORKED OUTSIDE THE HOME	4,231	97.23%
PKMONEY	R125-SERIOUS FINANCE PROBLEMS IN FAMILY	6,403	98.44%
PKMONYR	R126-YEARS FAMILY HAD FINANCE PROBLEMS	1,452	95.32%
PKMONMO	R126-MONTHS FAMILY HAD FINANCE PROBLEMS	1,452	94.83%
PKFOODST	R127-DID FAMILY RECEIVE FOOD STAMPS	6,403	98.45%
PKFOODYR	R128-YEARS FAMILY GOT FOOD STAMPS	1,513	94.05%
PKFOODMO	R128-MONTHS FAMILY GOT FOOD STAMPS	1,513	92.73%
PKAFDC	R129-FAMILY RECEIVED AFDC	6,403	98.24%
PKAFDCMO	R130-MONTHS FAMILY RECEIVED AFDC	1,102	91.20%
PKAFDCYR	R130-NUMBER YEARS FAMILY RECEIVED AFDC	1,102	93.01%
PKMOVE	R131-HOW MANY TIMES CHILD MOVED	6,403	98.25%
MOMKIDYR	R132-CHILD AGE WHEN MOM CAME/YEARS	480	77.50%
MOMKIDMO	R132-CHILD AGE WHEN MOM CAME/MONTHS	480	76.67%
MOMMARRY	R133-MOM MARRIED WHEN CHILD WAS BORN	10,888	95.15%
MOMSTAT	R134-MOM'S CURRENT MARITAL STATUS	10,643	95.21%
MOMLANG	R135-FIRST LANGUAGE SPOKEN BY MOTHER	10,643	94.68%
MOMSPEAK	R136-LANGUAGE SPOKEN MOST AT HOME BY MOM	1,445	95.85%
MOMGRADE	R137-HIGHEST GRADE MOTHER COMPLETED	10,643	98.68%
MOMDIPL	R138-MOTHER COMPLETED HS DIPLOMA	1,462	98.70%
MOMWORK	R139-MOTHER WORKED FOR PAY LAST WEEK	10,643	98.83%
MOMLEAVE	R140-MOM ON LEAVE OR VACATION LAST WEEK	4,501	98.80%

Table 19.--Item response rates in the School Readiness interview--Continued

Variable	Item Number and Label	Number eligibl	Response rate
MOMHOURS	R141-HOURS PER WEEK MOTHER WORKS FOR PAY	6,402	98.73%
MOMMTHS	R142-MONTHS MOM WORKED IN PAST YEAR	10,643	85.26%
MOMLOOK	R143-MOM LOOKING FOR WORK PAST 4 WEEKS	4,241	98.73%
MOMPUBL	R144-MOM CHECKED PUBLIC EMPLOY AGENCY	692	96.97%
MOMPRIV	R144-MOM CHECKED PRIVATE EMPLOY AGENCY	692	96.97%
MOMEMPL	R144-MOM CHECKED W/EMPLOYER DIRECTLY	692	96.68%
MOMREL	R144-MOM CHECKED W/FRIENDS/RELATIVES	692	96.97%
MOMANSAD	R144-MOTHER PLACED OR ANSWERED ADS	692	96.97%
MOMREAD	R145-MOM READ WANT ADS	692	96.97%
MOMOTHER	R146-MOM DID OTHER THINGS TO FIND WORK	692	96.97%
MOMACTY	R146-MOTHER'S MAIN ACTIVITY LAST WEEK	3,655	98.85%
DADKIDMO	R146-CHILD AGE WHEN DAD CAME/MONTHS	801	95.01%
DADKIDYR	R146-CHILD AGE WHEN DAD CAME/YEARS	801	95.88%
DADLANG	R147-FIRST LANGUAGE SPOKEN BY FATHER	8,526	95.17%
DADSPEAK	R148-LANGUAGE SPOKEN MOST AT HOME BY DAD	1,158	95.60%
DADGRADE	R149-HIGHEST GRADE FATHER COMPLETED	8,526	98.36%
DADDIPL	R150-FATHER COMPLETED HS DIPLOMA	1,014	96.25%
DADWORK	R151-FATHER WORKED FOR PAY LAST WEEK	8,526	98.80%
DADLEAVE	R152-DAD ON LEAVE OR VACATION LAST WEEK	754	98.14%
DADHOURS	R153-HOURS PER WEEK FATHER WORKS FOR PAY	7,923	97.82%
DADLOOK	R154-DAD LOOKING FOR WORK PAST 4 WEEKS	603	97.18%
DADPUBL	R155-DAD CHECKED PUBLIC EMPLOY AGENCY	334	95.51%
DADPRIV	R155-DAD CHECKED PRIVATE EMPLOY AGENCY	334	95.51%
DADEMPL	R155-DAD CHECKED W/EMPLOYER DIRECTLY	334	95.51%
DADREL	R155-DAD CHECKED W/FRIENDS/RELATIVES	334	95.51%
DADANSAD	R155-FATHER PLACED OR ANSWERED ADS	334	95.51%
DADREAD	R155-DAD READ WANT ADS	334	95.51%
DADOTHER	R155-DAD DID OTHER THINGS TO FIND WORK	334	95.51%
DADACTY	R156-FATHER'S MAIN ACTIVITY LAST WEEK	314	97.77%
SEEPARN	R157-HOW OFTEN CHILD SEES ABSENT PARENT	3,294	93.75%
TEFAMILY	R158A-USED FAMILY AS INFO SOURCE	10,888	98.94%
TEFRIEND	R158B-USED FRIENDS AS INFO SOURCE	10,888	98.92%
TEBOOKS	R158C-USED BOOKS AS INFO SOURCE	10,888	98.93%
TEMAG	R158D-USED MAGAZINE/NEWSPAPER AS SOURCE	10,888	98.92%
TETV	R158E-USED TV/VIDEO/RADIO AS SOURCE	10,888	98.93%
TEPASTOR	R158F-USED RELIGIOUS ADVISOR AS SOURCE	10,888	98.85%
TELIBRAN	R158G-USED LIBRARIAN AS SOURCE	10,888	98.93%
TETEACHR	R158H-USED CHILD'S TEACHER AS SOURCE	10,888	98.93%
TEDOCTOR	R158I-USED DOCTOR AS SOURCE	10,888	98.92%
TESPECSC	R158J-USED SCH ED SPEC AS SOURCE	10,888	98.92%
TESPEC	R158K-USED COUNS/SOC SERV AS SOURCE	10,888	98.89%
TEPARENT	R158L-USED PARENT SUPPORT GRP AS SOURCE	10,888	98.93%
TECLASS	R158M-USED CLASS OR SEMINAR AS SOURCE	10,888	98.92%
KPCOUNT	R159A-IMPRTNT FOR K TO COUNT TO 20	4,356	98.69%
KPSHARE	R159B-IMPRTNT FOR K TO TAKE TURNS/SHARE	4,356	98.74%
KPCURIOS	R159C-IMPRTNT FOR K TO BE CURIOUS	4,356	98.53%
KPPENCIL	R159D-IMPRTNT FOR K TO USE PENCILS	4,356	98.69%
KPSTILL	R159E-IMPRTNT FOR K TO SIT STILL/PAY ATT	4,356	98.65%
KPALPHA	R159F-IMPRTNT FOR K TO KNOW ALPHABET	4,356	98.62%

Table 19.--Item response rates in the School Readiness interview--Continued

Variable	Item Number and Label	Number eligibl	Response rate
KPVERBAL	R159G-IMPRTNT FOR K TO COMMUNICATE WELL	4,356	98.69%
HOWNHOME	R160-OWN, RENT HOME OR SOMETHING ELSE	10,888	98.83%
HBEDRMS	R161-NUMBER OF BEDROOMS IN HOME	10,888	98.84%
HLIVE	R162-CHOICE OF HOME INFLUENCED BY SCH	10,888	98.96%
HINCMRNG	R168-TOTAL HOUSEHOLD INCOME - RANGE	10,888	95.59%
HINCOME	R168-TOTAL HOUSEHOLD INCOME	10,888	92.91%

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1993

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Imputation in the NHES:93

This section describes the imputation procedures used in the NHES:93. All questionnaire items with any missing data, with the exception of string text items (e.g., other, specify responses), were imputed. In the previous NHES collection, the NHES:91, only variables that were used for the development of weights or derived variables were fully imputed. The imputation of all missing values in the NHES:93 was designed to facilitate the analyst's work by eliminating the need to account for missing values in the data base through recoding or imputation. Data users who wish to set imputed values back to missing or use another approach to imputation than the one described below can use the imputation flags on the data file to identify imputed values.

The imputation process for the NHES:93 required a total of 153 runs of the computer program (WESDECK); some of these runs were done more than once. The large volume of data runs was necessitated by the different paths and large numbers of skip patterns in the NHES:93 questionnaire. In addition, the data editing was being completed at the same time imputation was being done, complicating the process since the two processes affected one another. As a result, the NHES:93 imputation was an iterative process.

The first step in the process was to look at the data and determine the amount of missing data. If the percent missing was greater than five percent of the total sample, the possible use of special imputations was investigated. Otherwise, standard methods were used. Next, if the item was in a skip pattern, the appropriate skip patterns were established. The skip patterns were then used to modify the sort variables (described below) for the specific items. The imputations were then run and checked.

Each imputation run was guided by sort variables and, as appropriate, trigger variables. Sort variables are those that are used to group cases with like characteristics for the purpose of selecting donors. For the SR and SS&D interviews, both "hard" and "soft" boundary sort variables were used. Hard boundaries were those that could not be crossed to select a donor during the imputation run. Soft boundaries were those that could be crossed if no donor within the soft boundary was available. Hard sort variables for SS&D were MAINRSLT (the interview completion status code, which indicated the interview path), *IGRADE*, and SEX. These variables were considered important enough so that the donor and recipient must match. Soft boundaries were *FAMSIZE* (two parents in household/other) and *RACEETH* (Hispanic/black, non-Hispanic/other). The hard boundary variables used for SR were MAINRSLT, *IGRADE* (or enrollment status for preschoolers), SEX, and *FAMSIZE*. *RACEETH* and *INCOME* (under $25,000/$25,000 or more) were soft boundaries. (Variables in italics were created specifically for use in imputation and are not available on the public data file).

If the imputation failed because there were no donors in the cell defined by the hard boundary, the trigger variables and sort order variables were examined. Trigger variables are those that control the skip patterns in the questionnaire; they act as hard boundaries. For example, whether the child's mother worked for pay in the previous week is a trigger for the question about the number of hours she worked, since the response to the former question determines whether the later question is asked. Changes were made to the trigger variables and/or sort order variables if necessary to find a donor, and the imputation was rerun. This last step was repeated until the imputation ran without any errors.

An example of a variable for which the adjustments described above were made is the School Safety and Discipline (SS&D) item SCASSIGN; the percent missing was found to be 1 percent.

SCPUBLIC is the trigger variable for SCASSIGN. SCPUBLIC was added to the standard set of sort order variables as a hard boundary. Before imputation was run, imputation of the trigger variable SCPUBLIC was checked. If there was any imputation of SCPUBLIC to a value of 2, those cases were identified and their inapplicable (-1) values of SCASSIGN were changed to 'not ascertained' (-9) before imputation (if SCPUBLIC = 2, then SCASSIGN should be asked). Then the imputation procedure was run. If there were no problems with the output, the imputation was complete.

Some items did not have trigger variables because they were asked of all respondents. Others had trigger variables that were based on the responses to more than one item. For example, the trigger variable for PREKANY, a School Readiness (SR) item, is 'If HEADSTRT = 1 or HEADEVR = 1 or PREKIND = 1 or PREKEVR = 1.' The more involved trigger variables took more time during imputation. This example also shows how the order of the imputation is important. In the case of PREKANY, all of the variables used to define the trigger needed to be imputed before PREKANY.

For most of the items, a standard hot-deck imputation procedure was used to impute for the missing items. This was implemented by WESDECK, an imputation macro developed by Westat. Hot-deck imputation is a stochastic procedure in which missing values are replaced by values from one or more other records from the current survey. The data set was divided into a set of cells where it was assumed that missing cases in a particular cell are similar to reported cases in the same cell. The boundaries between those cells can be hard or soft. If the boundary is soft, then the imputation procedure reaches across the boundary when necessary to find a donor for the missing case. If the boundary is hard, the macro will leave a case missing rather than reach across the boundary. If there are no donors within the cells defined by the hard boundary variables, then the hard boundary variables must be changed so the imputation can be completed.

Don't Know Responses

For some SS&D items, "don't know" responses were expected to be of interest to analysts. For example, an analyst may have an interest in knowing the percentage of parents who reported that they did not know whether incidents such as thefts, bullying, stealing, or assaults had happened at their child's school. The imputation flags for these items have a value of '2,' indicating that the original response was don't know. Analysts can use these flags to recode the responses to "don't know" if they wish to do so.

The list of these variable appears below, by questionnaire item number. The questionnaire is available in *National Household Education Survey of 1993: School Safety and Discipline Data File User's Manual* (Brick et al. 1994).

PY21a-e
PY22
PY23
PY24
P25
PY26
PY27
PY28
PY29
PY30
PY31
PY32
PY33
PY34
PY35
PY36
PY37
PY38
PY39
PY40
PY41
PY42
PY43
P45
PY46
PY47
PY48
PY49
PY50
PY53
PY55a-h
P56
PY57
P59
PY62a-g
PY63
PY64
P65
P67
PY68a-d
PY84a-c

Items with High Nonresponse Rates

If the level of nonresponse was high for a specific variable (more than 5 percent of the total sample), then special procedures were used to determine if sort variables other than the standard ones were needed to improve the imputation. An item nonresponse rate of 5 percent was used as a general rule for looking for other sort variables. For SSGANNUM and MOMMTHS (2 of the variables with rates above 5 percent) tabulations and correlations were run to find other variables to be used in the sorts. (Detailed specifications for the imputation of all items, including those with high nonresponse, are available from NCES in a separate document).

As noted in the text concerning item response rates in the NHES:93, many of the items with response rates below 95 percent (based on those who were asked the question) were asked of a small percentage of the respondents. In some cases, items with high nonresponse rates were asked in less than 100 cases; many others were asked of small percentages of the sample (e.g., 5 or 10 percent). Special imputation procedures were not used for these variables, because there were too few cases to divide the donors into additional categories beyond the standard boundary variables.

Manual Imputation

Some items were imputed manually rather than using the automated procedures used for most other items. AGE1 - AGE9, SEX1 - SEX9, RELATN1 - RELATN9, and CRELN1 - CRELN9 were imputed by hand for two reasons. First, the amount of missing values was small (less than 100 missing values for all items combined). Second, the complicated relationships between household

members were difficult to put into sort order variables. Household information such as MOMAGE, DADAGE, MOMHOME, DADHOME, BIRTHMOM, BIRTHDAD, HHMOM, HHDAD, AGE1 - 9, SEX1 - 9, RELATN1 - 9, etc. were used to hand impute missing values. For example, if RELATN3 was missing for the third child in a household, and the second child was a sibling to the subject (the first child in the household), and the children had the same BIRTHMOM and BIRTHDAD, RELATN3 was hand imputed to 3 (sibling).

Post-Imputation Editing

After imputation, the data sets were merged back into the CATI system for data quality checks. Because editing was being finished at the same time as imputation was occurring, there were some logically inconsistent values, newly missing values, and imputed values that were out of range. These values were set back to missing during the editing. Further imputations were then necessary for approximately 70 items. For most of these items, only a few values were missing after imputation. A simplified manual imputation was used for these missing values. The distribution of the completed data was used to draw donors for the missing items. Thus, for these newly missing values the standard sort variables were not used to control the process. With so few imputations, this was deemed to be a reasonable procedure.

Imputation Flags

For each data item that was imputed, an imputation flag variable was created. If the response for the item was imputed, the imputation flag was set equal to one. Otherwise, it was set to zero. The exceptions are noted above; a value of '2' is given for SS&D items for which a response of "don't know" may be of analytical interest.

When questionnaires have complex skip patterns, as do the NHES:93 instruments, it is necessary to decide on the rules for the flagging of imputed items. In particular, different persons use different procedures for flagging items that are imputed as skips. An example of an item imputed to a skip is as follows: Say that a case is missing the response to the question on whether the child's school is public or private. This variable is imputed to public. The followup question on whether the school is affiliated with a religion would be imputed to -1 (the skip indicator for all NHES variables) since this question is not appropriate for public schools. Some persons choose to flag this skip value as an imputed value, whereas others flag only those cases imputed to response (nonskip) values. In the NHES:93, the latter approach is taken -- imputation flags are not set as imputed for skip values (-1).

Frequencies of imputation flags for all variables are shown in the codebook sections of the data file user's manuals (see reference list).

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